THE

BRITISH MISCELLANY:

OR

COLOURED FIGURES

OF

NEW, RARE, OR LITTLE KNOWN

ANIMAL SUBJECTS;

MANY NOT BEFORE ASCERTAINED TO BE INHABITANTS
OF THE BRITISH ISLES;

AND

CHIEFLY IN THE POSSESSION OF THE AUTHOR,

JAMES SOWERBY, F.L.S.

HONORARY MEMBER OF THE PHYSICAL SOCIETY OF GÖTTINGEN;
DESIGNER OF ENGLISH BOTANY AND EXOTIC BOTANY; AND
AUTHOR OF ENGLISH FUNGI AND BRITISH MINERALOGY.

Let no presuming impious railer tax
Creative Wisdom, as if aught was formed
In vain, or not for admirable ends.
. . . . . .
And lives the man whose universal eye
Has swept at once th' unbounded scheme of things?
Thomson's Seasons, line 318, *&c.*

VOL. I.

LONDON:

PRINTED BY R. TAYLOR & Co., 38, SHOE-LANE, FLEET-STREET;

And sold by the Author, J. SOWERBY, at No. 2, Mead-Place,
Lambeth; by WHITE, Fleet-street; JOHNSON, St. Paul's
Churchyard; SYMONDS, Paternoster Row; and
all other Booksellers.

MDCCCVI.

Zool. 498 ii-1

BIBLIOTHECA
REGIA
MONACENSIS.

32

TO

THE RIGHT HONOURABLE

FRANCIS LORD SEAFORTH, F.R.S. F.L.S.

GOVERNOR OF BARBADOES,

AND TO

JAMES BRODIE, ESQ., F.R.S. F.L.S.

M. P. FOR FORRES IN NORTH BRITAIN,

I beg leave to dedicate these pages. To his Lordship's bounty I owe the greatest part of my Collection of British Birds; and to the favour of Mr. Brodie I am indebted for procuring me such an advantage, as well as for his own personal assistance and zeal in furnishing such subjects of Natural History as his opportunities admit of;

Who am

their most grateful humble Servant,

JAMES SOWERBY.

Mead Place, Lambeth,
Feb. 1, 1806.

PREFACE.

WHILST so many new and interesting objects in Natural History are constantly unfolded to our view, it is astonishing to find how often the same subject is displayed in different works. The author of The British Miscellany considers himself as the first who has undertaken to collect for publication, merely the new and rare productions of Great Britain; and he has great pleasure in finding his exertions repaid by the stimulus they have given to the followers of Nature in every department. Objects which in former ages were passed over as too minute or too insignificant for observation, are generally found to repay the investigator of them either by their beauty or utility. The present enlightened age seems very desirous of elucidating the obscurities of former times; since it is become very evident, that the least as well as the largest work of nature is equally the production of an all-wise Creator.

Upon Natural History all the most useful arts are dependent; it is also the greatest reflecter of that

wisdom which man alone is allowed to contemplate. Philosophers, both of antient and modern times, have endeavoured to show, that to study Nature is the most effectual way to produce in our minds a veneration for the omnipotent Creator. The more we investigate the wonders of his bounty, the more convinced we shall feel that it is our duty to explore and examine the treasures which are at present dormant.

To the numerous friends who have honoured me with patronage and assistance in the present work I beg leave to offer my most grateful thanks; and can only assure them that my abilities shall be most strenuously exerted to render the future volumes of it deserving the encouragement that has been given to the present one.

With regard to the execution, the best criterion is, that the most perfect judges have thought it worthy of encouragement, and the enlightened assistance it has received will be readily discerned by the true critic.

ALPHABETICAL INDEX

TO

VOL. I.

	Tab.	Page.
A		
Actinia equina	4	7
——— *rufa*		7
Aminthe L'		99
Ammophyla hirsuta	33 *f.* 1	67
——— pulvillata	33 *f.* 2	67
Amphitrite ventilabrum	12	25
Anas histrionica	6	11
—— *minuta*	6	11
—— *Nyraca*		43
—— Nyroca	21	43
Apis flavicollis	19	39
Aplysia hybrida	53	111
Asterias endeca	24	49
B		
Barbastelle		9
Brill		105
Brimond		11
C		
Cachalot, two-toothed		1
Callidium fulminans		123
Canard, Le, brun		11
——— *et blanc*		11
——— *à Collier, de Terre neuve*		11
Cancer Maja	39	79
——— *horridus*		79, 80
——— spinus	23	47
Carabus angustatus	36	73
——— chrysostomos	59	125
——— *dentatus*		125
——— nitens	27	55
Cardium spinosum	32	65
Cerambyx fulminans	58	123
Cidaris papillata major		89
Cicindela hybrida	18	37
——— *emarginata*		125
——— *maculata*		37

	Tab.	Page.
Clytus fulminans		123
Coluber Dumfrisiensis	3	5
Corallina auricularіæformis	56	119
Coralline, Maltese tubular		25
Corallium cretaceum lichenoides		119
Courlis, Le, verd		35
——— *d'Italie*		35
Cuttle-fish, eight-armed		101
Colymbas hybridicus?	70	19 vol 2
D		
Demoiselle dorée verte		99
Dragon Fly, metallic		99
——— *stained*		97
Drypta emarginata		125
Duck, dusky and spotted		11
—— *Harlequin*		11
—— *little brown and white*		11
—— *olive-tufted*		43
—— *stone*		11
— white faced		5 vol 2
E		
Echinus cidaris? *var. a*	44	89
Eggs, Sea		89
Elater cyaneus	26	53
— chalybeus	72	23 vol 2
F		
Falcinellus		35
Flustra avicularis	71	21 vol 2
G		
Gorgonia, *slender*		81
——— viminalis?	40	81
Grebe-black chinned		19 vol 2
Gryllus viridulus	H 73	25 vol 2
Hedgehogs, Sea		89
Hemerobius. Larva of	66	13 vol 2
Hirudo circulans	I 76	31 vol 2
Ibis, Bay		35
Ichneumon persuasorius	52	109
K		
King Fish		45
L		
Laplysia depilans?		111
Larus alter fidipes nostras		19
Libellula conspurcata	46	97
——— ænea	47	99
Lineus longissimus	8	15
Line-worm		15
Long Worm, Sea		15
Locusta Grisea	64	9 vol 2.
Lerneа Spratta	68	17* vol 2.

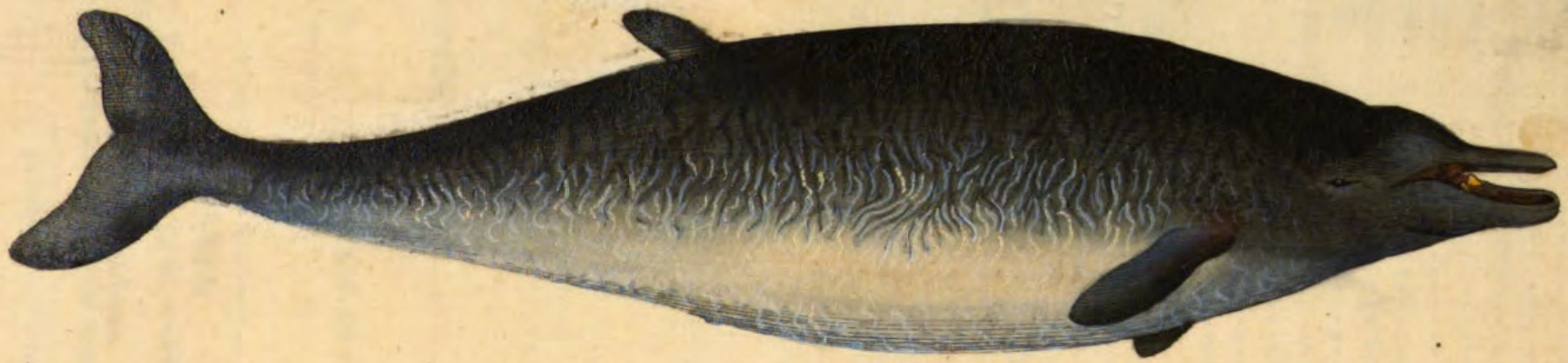
	Tab.	Page.
M		
Maltese Tubular Coralline		25
Melitta nigro-ænea	38	77
Millepora compressa	41	83
Monodon monoceros	9	17
Moth, Gold Spangle		57
—— *Yorkshire burnished Brass*		59
Mytilus *maximus planior viridescens edentulus*		33
—— stagnalis	16	33
Merops apiaster	69	17 vol 2
N		
Narwhal		17
Nereis lamelligera	30	61
—— pectinata	51	107
Noctua bracteina		59
Numenius subaquilus		35
—— *viridis*		
O		
Oniscus longicornis	15	31
Opah		45
P		
Papilio *Æthiops*	2	3
—— *Alexis*		13
—— Blandina		3
—— Charlotta	11	23
—— Chryseis	13	27
—— *Ligea*		3. 13
—— Ligea	7	13
—— *Medea*		3
Pearl		105
Pen, Slender Sea		51
Pennatula mirabilis?	25	51
Phalæna ærifera	29	59
—— Bractea	28	57
—— Catena	14	29
—— Oleagina	37	75
—— *X.* scriptum	55	117
Phalangium Diadema	20	41
Phalarope, red-necked		19
—— *red*		19
Phalarope, Le, cendré		19
—— *rouge*		
Phalaropus *cinereus*		19
—— hyperboreus	10	19
—— *rufescens*		20
Physeter bidens	1	1
Pimpla persuasoria		109
Pleuronectes rhombus	50	105

S.	Tab.	Page.
Sabella tubiformis		108
Sand-wasp, hairy		67
Sarcelle, La, de la Baye de Hudsone		11
Scarabæus foveatus	35 *f.* 2	71
——— globosus	34	69
——— pumilus	57	121
——— spiniger	35 *f.* 1	71
Sea-Pen, slender		51
——Star, nine-rayed		49
——Unicorn		17
——Urchins		89
Sepia octopus	48	101
Serpula triquetra	31	63
Shrew-mouse, Fringe-tailed water		103
Shrimp, Spine-backed		47
Snake, Dumfriesshire		5
Sponge, compact tubular		85
——— *cancellated*		129
Spongia cancellata	60	129
——— compacta	42	85
——— pulchella	43	87
Staphylinus concolor	54	115
——— *dilatatus*		115
Star-fish, nine-rayed		49
Stylops Melittæ	45	93
Salmo Fario	61	1 vol 2.
T.		
Tantalus Falcinellus	17	35
Tringa, Coot-footed		19
———, *Cock*		
———, *Red.*		20
——— *fulicaria*		20
——— *hyperborea*		19
Trout Gallarae		1 vol 2
Tellina similis V.	75	29 vol 2
Vespertilio Barbastellus	5	9
Z.		
Zeus, *cauda bifurcata, colore argenteo-purpureo*		
——— *splendens*		45
——— Opah	22	45

ERRATA.

Page 5 Line 4, for *Ord.* 1. Reptilia, *read Ord.* 2. Serpentes.
13 —— last, *for* 3, *read* 2.
69 —— 2, *for* ovatus, *read* globosus.
73 —— 2, *for* rotundicollis, *read* angustatus.

Printed by R. TAYLOR *and* Co., 38, *Shoe Lane.*



Oct. 1. 1804. Published by Jas. Sowerby, London.

TAB. I.

PHYSETER bidens.

Two-toothed Cachalot.

Class 1. Mammalia. *Order* 7. Cete.

GEN. CHAR. *Teeth* bony, only in the lower jaw. A *spiracle* in the fore part of the head.

SPEC. CHAR. Teeth two, one on each side the jaw.

FOR this animal I am indebted to that zealous promoter of natural history, my very kind friend James Brodie, Esq. F. L. S., who has made every exertion in his power to show the world that it may be added to the present list of British zoölogical subjects; and indeed, as far as we know, it is quite a new species. It was observed by this gentleman, cast on his own estate, near Brodie-house, Elginshire. On account of its weight and bulk, he sent me only the head; a sufficient mark to distinguish it from all others of this genus, and to serve as a specimen for my museum. I was much pleased and astonished when I found, from the extraordinary formation of its mouth, and the situation of its teeth, that this was likely to prove a species not yet described; and I was soon confirmed in that opinion by examination, and comparison at that great source of knowledge and instruction in Soho Square.

Mr. Brodie (who assisted me with the sketch and description of the rest of this animal) observes, that the cuticle on every part of the head and body was perfectly pellucid and satiny, reflecting the sun to a great distance. Imme-

diately under the cuticle, the sides were completely covered with white vermicular streaks, in every direction, which at a little distance appeared like irregular cuts with a small sharp instrument. It was a male animal.

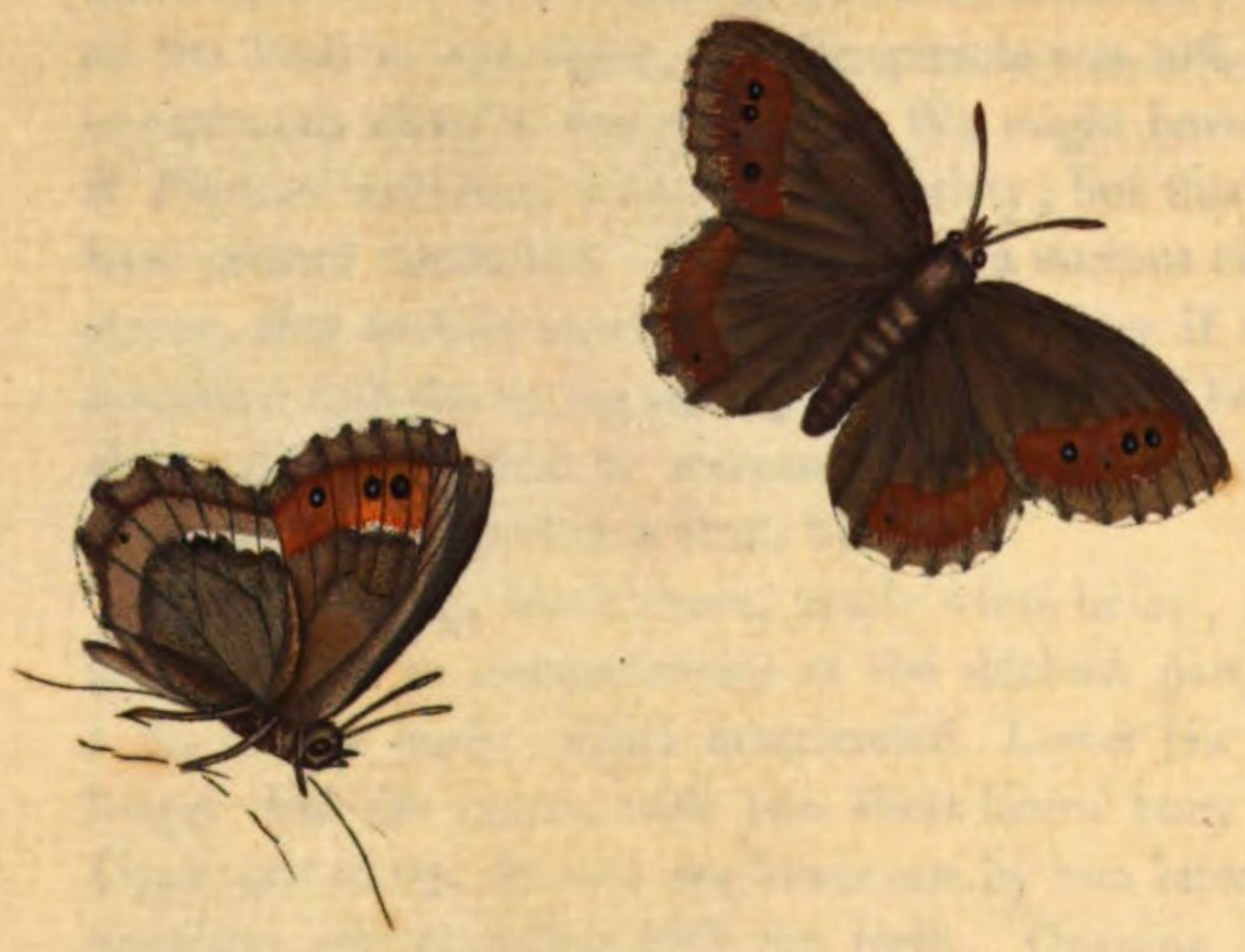
We know of no whale, with only two teeth in the lower jaw, described by any author. Gmelin mentions one with two teeth in the *upper jaw*, which he calls *Balæna rostrata*. Johnson has figured what he calls *Delphinus fœmina* with apparently two teeth in the *upper jaw*, and impressions in the lower one*. We cannot be mistaken as to the position of the head in our figure, for the spiracle was sufficiently conspicuous when it was received. We might have called it *Physeter rostratus*, with some propriety; but this might have created confusion. It is however a curious circumstance, that such an appellation would suit better if it were described with the wrong side upwards; which will be easily observed, if the plate be reversed: and the jaws, in this case, very aptly resemble a bird's beak.

Animal oblong, black above, nearly white below, 16 feet long, 11 feet in circumference at the thickest part, with 1 fin on the back. Head acuminated. Lower jaw blunt, longer than the upper, with two short lateral bony teeth. Upper jaw sharp, let into the lower one by two lateral impressions corresponding with the teeth. Opening of the mouth 1 foot 6 inches. Tongue smooth, vascular, small. Throat very vascular, rough. Under the throat are found two diverging furrows, terminating below the eyes; which are small, and placed 6 inches behind the mouth.

Spiracle lunate, the ends pointing forwards.

* These appear to be the same as Schreber's figure, which is marked *Delphinus bidens*; but we have not seen his description.

It is not unlike our animal, but, if meant for the same, is represented rather too short, with the head the wrong side upwards!



Dec.r 1. 1804. Published by Jas. Sowerby, London.

TAB. II.

PAPILIO Blandina.

Class 5. Insecta. *Order* 3. Lepidoptera.

GEN. CHAR. *Antennæ* thicker towards the end, and generally ending in a knob. *Wings* erect when sitting.

SPEC. CHAR. Upper wings dentated, fuscous; with a rufous stripe, and three eye-like spots. Lower wings fuscous beneath, with a grey stripe, and white mark.

SYN. P. Blandina. *Fab. Ent. Syst.* iii. 1. *p.* 236. *n.* 736. not *Turt. Linn. v.* 3. 108.
P. Ligea. *Scop. Carn. n.* 436.
P. Æthiops. *Esper. t.* 25. *f.* 3. *t.* 63. *f.* 1.
P. Medea. *Wien. Schmetterl.* 167. *n.* 7.

THIS newly discovered species of *Papilio*, as a native of Britain, was caught in the Isle of Arran, one of the Western Islands of Scotland. The specimen from which our drawing was taken is in the cabinet of our kind friend *A. MacLeay, Esq. Secr. Linn. Soc.*

The upper wings have a dentated appearance at the edges, are fuscous on the upper side, with a sort of orange-coloured irregular stripe, on which are three black rings, with a white

spot in the middle of each, and a small black spot; beneath paler fuscous, with an orange-coloured stripe and three black rings, white in the middle. Lower wings fuscous above, with an orange stripe and a black spot; with a light brown stripe beneath, a black spot, and an irregularly scalloped white mark.

This newly discovered species of Papilio, as a native of Britain, was caught in the Isle of Arran, one of the Western Islands of Scotland. The specimen from which our drawing was taken is in the cabinet of our kind friend A. Macleay, Esq. Secr. Linn. Soc.

The upper wings have a dentated appearance at the edges, are fuscous on the upper side, with a sort of orange-coloured irregular stripe, on which are three black rings, with a white

CAEN.

Oct.1.1804. Published by Jas Sowerby, London.

TAB. III.

COLUBER Dumfrisiensis.

Dumfriesshire Snake.

Class 3. Amphibia. *Order* 1. Reptilia.

GEN. CHAR. *Plates* on the belly. *Scales* under the tail.

SPEC. CHAR. Plates on the belly 162. Scales under the tail about 80.

THIS *Coluber* seems to be entirely new, and was discovered by *T. W. Simmons*, near Dumfries. As only one specimen has been seen, we cannot say much with regard to its usual size. The figures are pretty accurately drawn, as to the size of the specimen. The scales of the back are extremely simple, not carinated—see *the lowest figure*.

It is of a pale brown colour, with pairs of reddish brown stripes from side to side over the back, somewhat zigzag; with intervening spots on the sides.

TAB. IV.

ACTINIA equina.

Class 6. Vermes. *Order* 2. Mollusca.

GEN. CHAR. *Body* warted, fixed by the base, with one terminal aperture or mouth, surrounded by numerous cirrhi.

SPEC. CHAR. Greenish, with a rosy foramen or mouth, pale rosy cirrhi, with an aperture at the extremity of each.

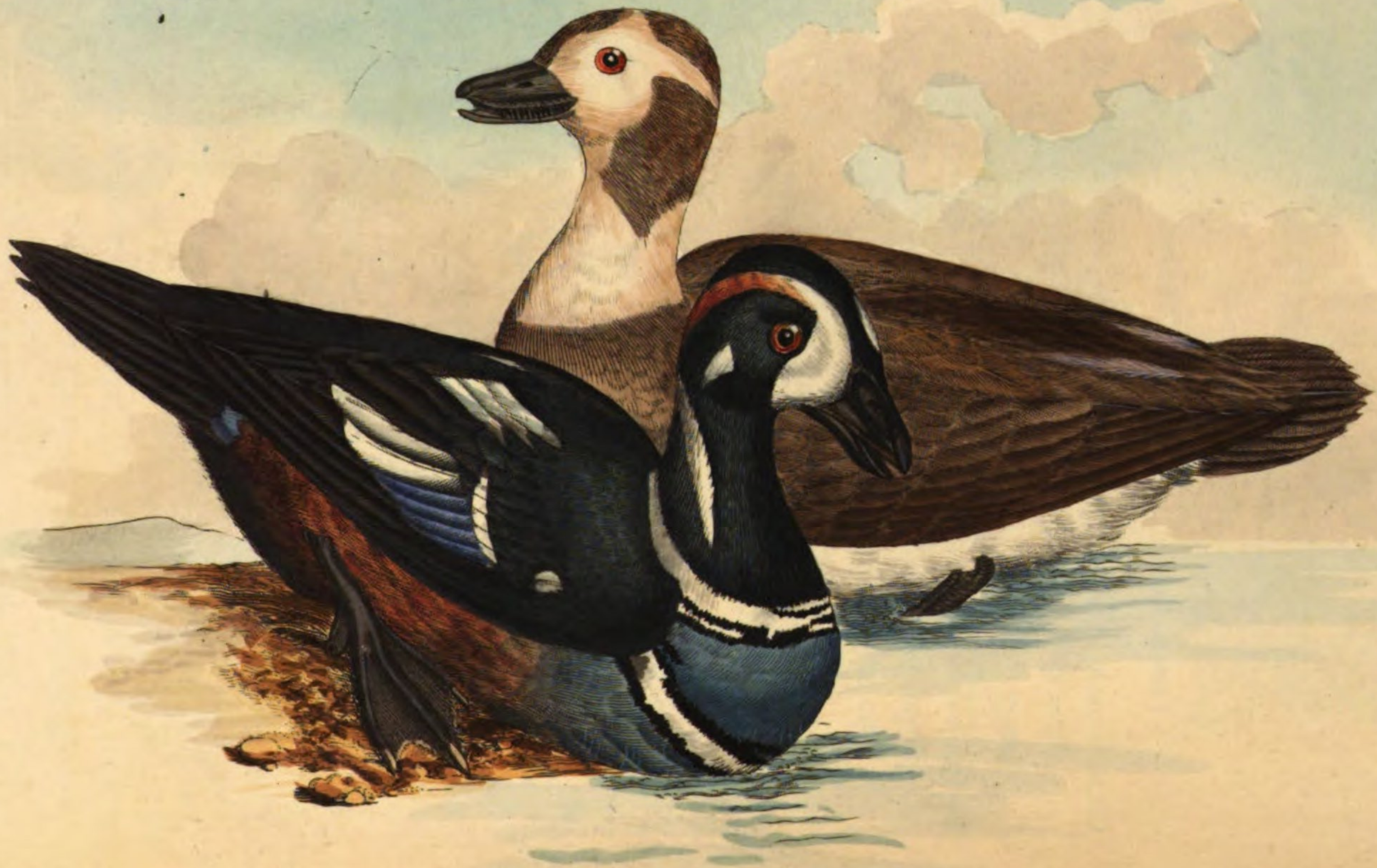
SYN. Actinia rufa? *Gmel. v.* 1. *p.* 3131.
Actinia equina? *Linn. Syst. ed.* 12. *v.* 1. *p.* 1088.
Dicquem. Phil. Trans. v. 63. *p.* 361. *t.* 16, 17. *f.* 10—12.

THESE have been found several times of late, generally after the most violent storms, by Dr. Smith of Yarmouth; who has occasionally kept them for a twelvemonth or more, giving them fresh sea water every day, and feeding them with oysters or muscles. Like others of the genus, this animal forms a sort of ball when at rest—see *the bottom figure;* and it is curious to observe the various appearances it assumes while expanding to the size of the upper figure. The cirrhi, being formed as it were for arms to the animal, are often displayed in so deliberate a manner that it would seem to have very little sensibility, were it not often very quick in drawing them in when disturbed. When touched at the

extremity, they remind us of the conductor of a weak electrifying machine, while in action; but adhere to the fingers. It often protrudes its stomach and expands it over its whole surface; at which time, if a fresh oyster or muscle be taken from its shell, and thrown to it, it envelops and draws it into its body; from whence, in a few days, it is again discharged by the same channel, altered and very much diminished. If the food given it be not quite fresh, it throws it to a distance and appears uneasy.

Body greenish above, variegated with orange-coloured stripes, and covered with minute white specks; when closed, roundish, warted, flat at the base with a narrow rim, grey beneath, and formed for attaching itself to stones. Mouth soft, red, surrounded by 138 cirrhi of a light rose-colour, cylindrical, perforated at the end. A red line runs nearly to the base of each, and is lost towards the mouth. Stomach light brown, plaited.

Jan.ʳʸ 1. 1808 Published by Jᵃˢ Sowerby, London.



Nov.r 1.1804. Published by Jas Sowerby, London.

TAB. VI.

ANAS histrionica.

Harlequin Duck.

Class 3. Aves. *Order* 3. Anseres.

GEN. CHAR. *Beak* with lamellar teeth, convex, obtuse. *Nostrils* ovate. *Tongue* ciliated, obtuse. *Feet* palmated; the three front toes united by a membrane; hind ones without a membrane.

SPEC. CHAR. *Male* fuscous, varied with white and blue; ears with a white line; neck and breast with a white stripe. *Female* grey; ears white; first wing-coverts blackish.

Male.

SYN. Anas histrionica. *Linn. Syst.* i. 204. 35. *Brun. Orn.* no. 84, 85. *Mull.* no. 127. *Faun. Grœnl.* no. 46. *Georgi Reise, p.* 166. *Phil. Trans.* lxii. 417. *Frisch. t.* 157.

Brimond. *Olaff. Icel.* ii. *t.* 34.

Le Canard à Collier de Terre Neuve. *Bris. Orn.* vi. 362. 14. *Buff. Ois.* ix. 250. *Pl. Enl.* 798.

Stone Duck. *Hist. Kamtsch.* 160.

Dusky and spotted Duck. *Edw. pl.* 99.

Harlequin Duck. *Arct. Zoöl.* no. 490. *Lath. Syn.* vi. 484. 38.

Female.

Anas minuta. *Linn. Syst.* i. 204. 36. *Brun.* no. 86. *Faun. Grœnl.* no. 46.

La Sarcelle de la Baye de Hudson. *Bris. Orn.* vi. 469. 41.

Le Canard brun. *Buff. Ois.* ix. 252. *Pl. Enl.* 1007.

——— brun et blanc. *Buff. Ois.* ix. 287. *Pl. Enl.* 799.

Little brown and white Duck. *Edw. pl.* 157. *Catesb. Car.* 1. 98.

Harlequin Duck female. *Lath. Syn.* vi. 485. 38.

The male and female of this were by Linnæus thought to be different species. We are however well assured of the contrary by our most kind friend Lord Seaforth, who procured and favoured me with these specimens from Scotland.

Mr. Simmons gave me a young female which he shot in one of the Orkneys.

Dr. Latham's description of it in his Synopsis is so good, that we cannot do better than follow him.

Male.—"Size of a Wigeon. Length one foot five inches: breadth twenty-six inches: weight eighteen ounces and three quarters, troy. Bill near an inch and half long, and black: irides hazel: between the bill and eye white, in some yellowish, or saffron colour*, extending a little over the eyes, and beyond. Crown of the head black, bounded by a reddish streak: on each side of the neck a perpendicular line of white, and above it a white spot; except this, the whole of the neck is black: round the breast is a white collar, broadest behind, where it is marked with black dots, and is bounded by a black band: between this and the wings is a transverse mark of white. The breast, below the collar, blueish ash colour. The back dusky brown, inclined to purple. Rump deep blue black. Belly and thighs black. Sides dull orange: on each side of the tail a spot of white. The prime quills dusky ash colour, some of them tipped with white. Tail brown. Legs blueish black."

Female.—"Length thirteen inches and a half. Bill black: irides hazel: the forehead and between the bill and eye white: on the ear a spot of the same: head, neck, and back brown; palest on the fore part of the neck: upper part of the breast and rump rufous brown: lower part of the breast and belly barred with pale rufous and white, but the lower belly and thighs with rufous and brown: scapulars and wing-coverts rufous brown; the outer greater ones blackish: quills and tail dusky, the last inclined to rufous: legs dusky."

* Muller.

Jan.y 1 1805. Published by Jas Sowerby, London.

TAB. VII.

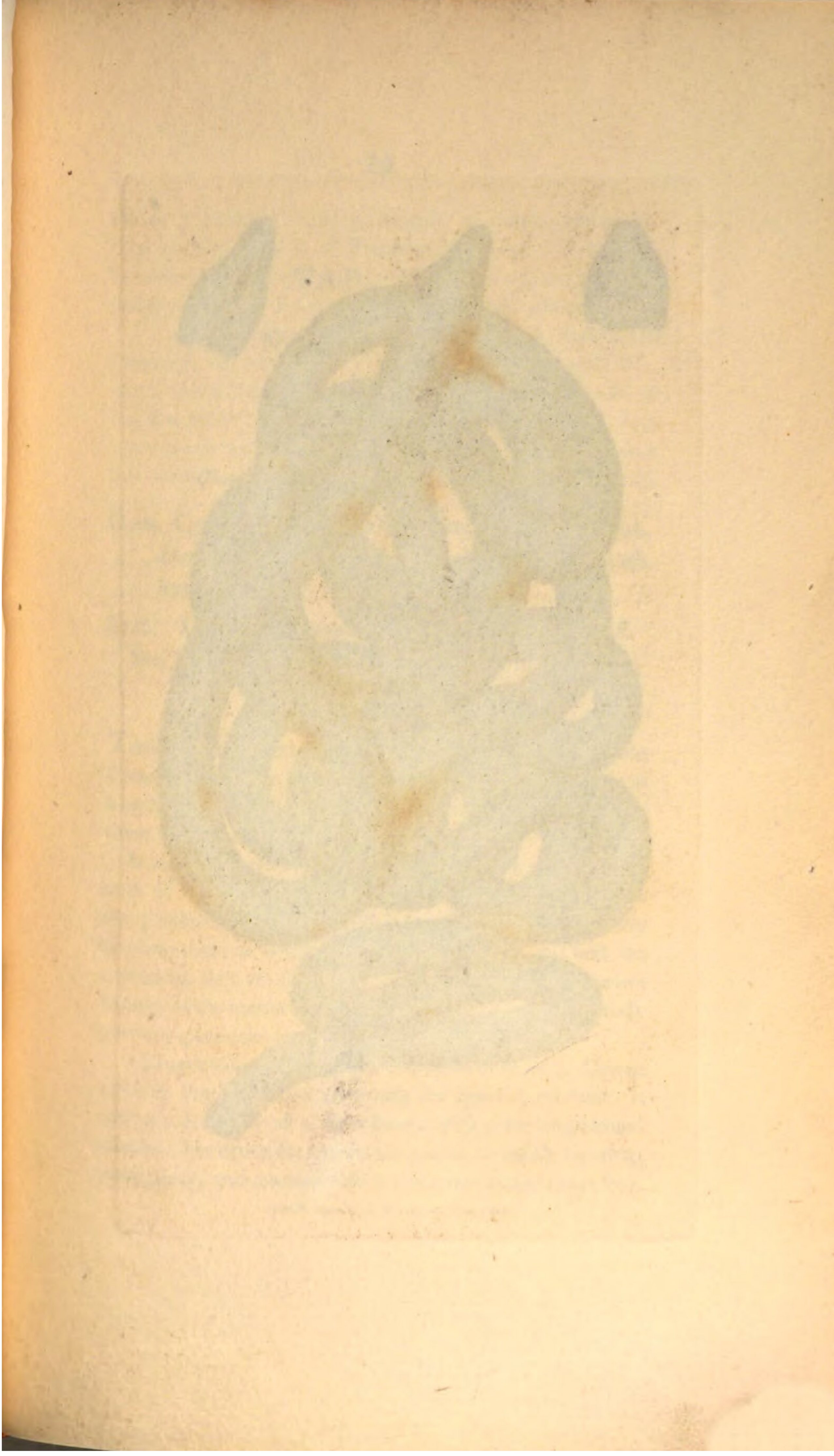
PAPILIO Ligea.

Class 5. Insecta. *Order* 3. Lepidoptera.

SPEC. CHAR. Wings dentated, fuscous, with a rufous stripe; on each side of the upper wing three eye-like spots; on the lower four; under side marked with grey.

SYN. Papilio Ligea. *Linn. Syst. Nat.* 2. 772. 144.
———— *Faun. Suec.* 1050.
———— *Fab. Ent. Syst.* iii. 1. *p.* 234. *n.* 732.
P. Alexis. *Esp. Tab.* 44. *f.* 1. 2.

THIS is another new British Insect, procured by A. MacLeay, Esq. Sec. L. S., from the same place as the one figured in *tab.* 3. of this Work.



Jan?. 1. 1806. Published by Ja.s Sowerby. London.

TAB. VIII.

LINEUS longissimus.

Black Line-Worm.

***Class* 5. Vermes. *Order* 1. Intestina.**

GEN. CHAR. *Animal* naked, simple, not attached. *Body* linear, smooth, depressed. *Mouth* beneath longitudinal.

SYN. Lineus longissimus. *T. W. Simmons's MSS.*
Sea Longworm. *Borlase's Cornwall, pl.* 26. *f.* 13.

THE first intelligence I had of this animal was from Colonel Montague, who informed me also of their great length, but found it difficult, from their rotting, to preserve them to send me.

It seems to have been long and well known to the fishermen of the coast; but after they have told one that it is many fathoms in length, and that though they are continually hawling them in as they would a rope, they never find the extremity, they are then sufficiently satisfied that one knows enough of the matter; and persuasion or money will scarcely procure specimens from them.

"Length many feet. Breadth one-third of an inch. Colour towards the head black; towards the opposite extremity it becomes gradually of a light brown with paler longitudinal streaks. The extremity nearest the mouth is slightly tapering, emarginate, and marked with a transverse semicircular line.

It appears capable of elongating itself, something in the manner of a leech. The mouth is situated half an inch distant from the apex, and forms a longitudinal aperture of three-quarters of an inch in length (to us it did not appear to be above a quarter of an inch). Motion very slow.

"This animal is frequently dredged up by the fishermen at Newhaven in the Frith of Forth. If plunged whilst living into alcohol, it contracts, and appears to be irregularly annulated. When permitted to remain in the same water many days, the posterior extremity becomes putrid and decomposed, whilst the other part remains entire and capable of motion. It is so fragile that the entire animal has not yet been procured. A detached piece measured twelve feet, and the fishermen at Newhaven assert that they have met with pieces more than as many *fathom* in length." The above description was taken from the MSS. of Mr. T. W. Simmons of Edinburgh, to whom I am indebted for specimens of this extraordinary animal.

Feb.y 1 1805 Published by Ja.s Sowerby, London.

TAB. IX.

MONODON Monoceros.

Sea Unicorn, or Narwhal.

Class 1. Mammalia. *Order* 7. Cete.

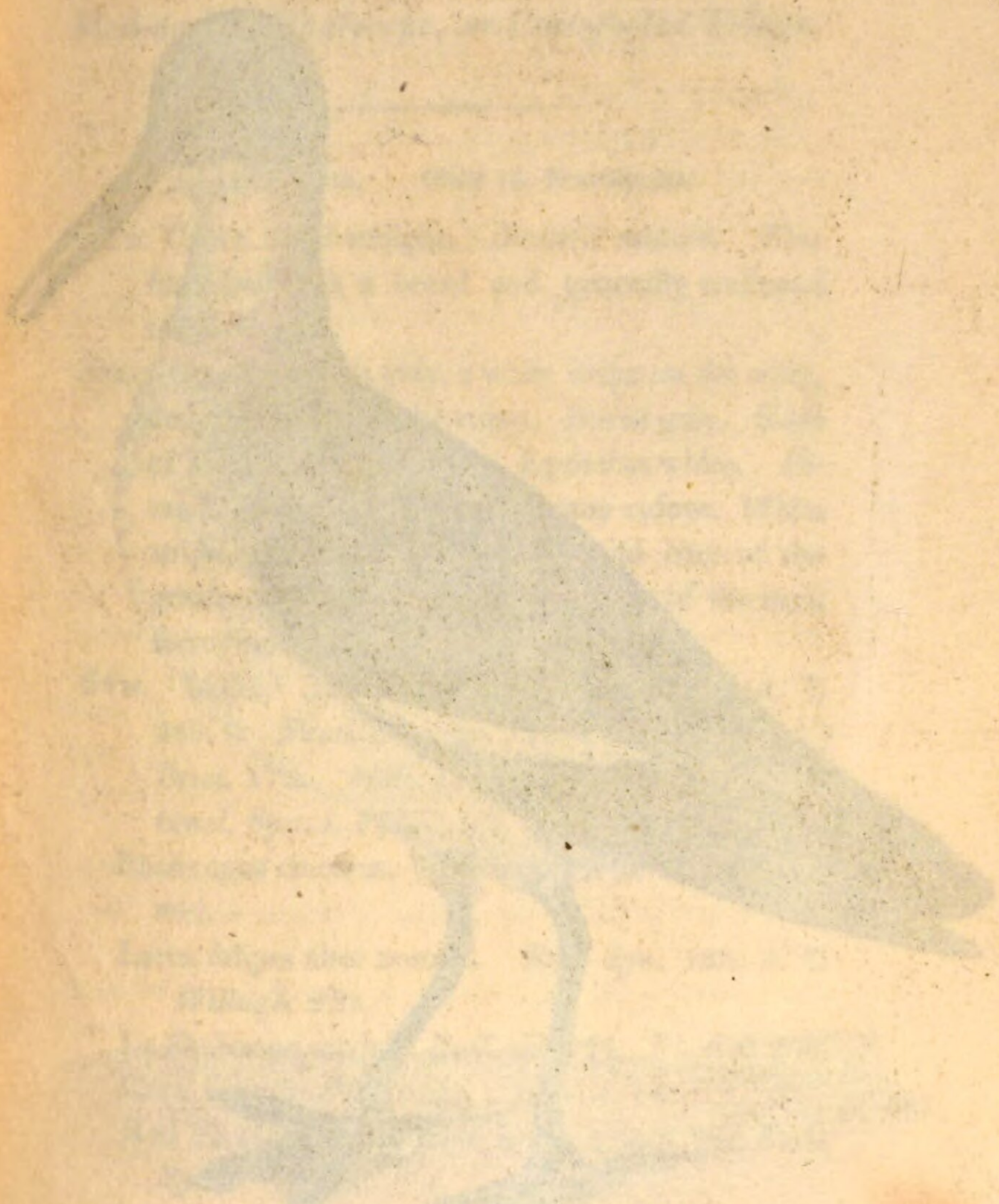
GEN. CHAR. *Teeth* two, long, spiral, projected forwards from the front of the upper jaw, through the lip.

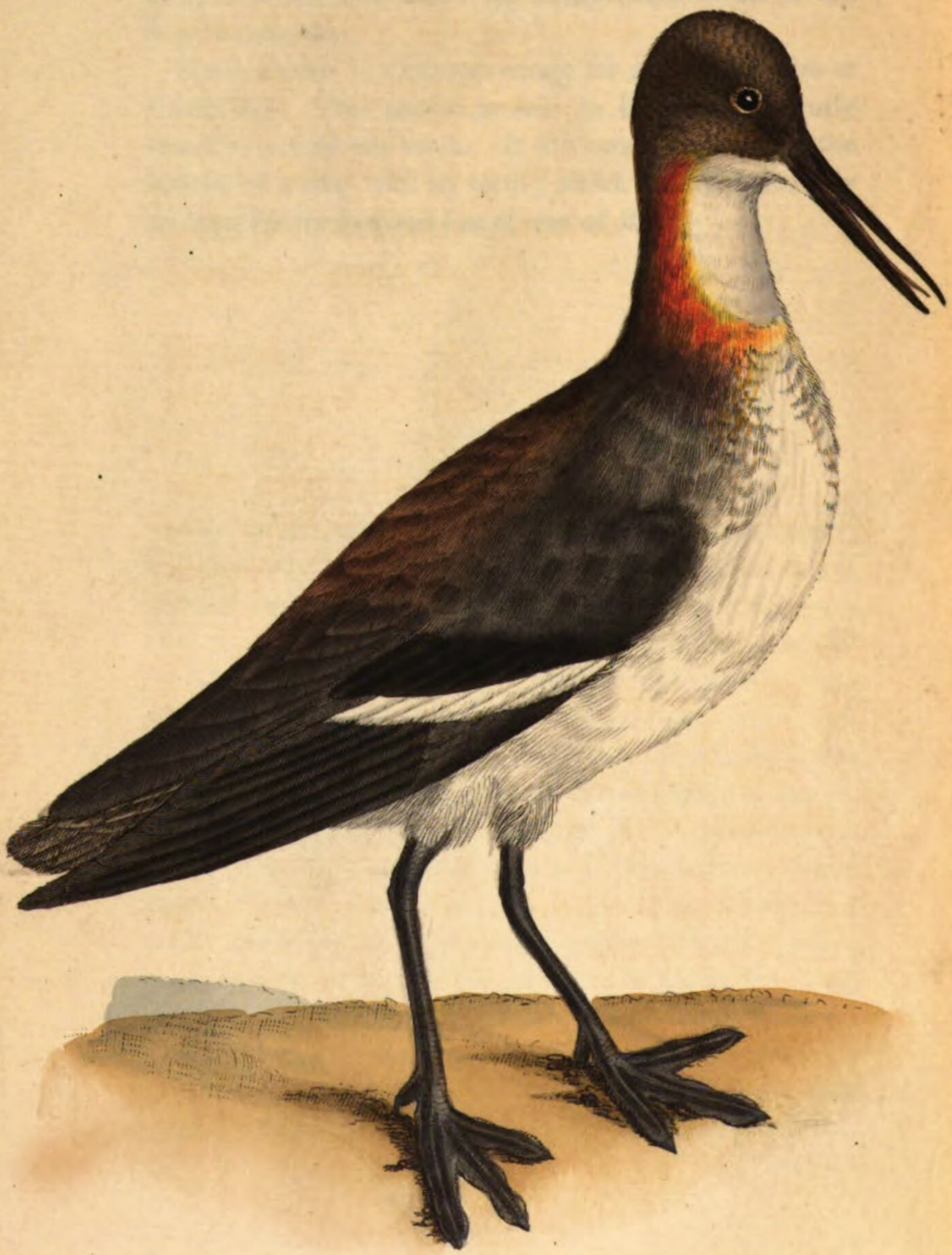
SYN. Monodon Monoceros. *Linn. Syst. Nat. ed.* 13. *v.* 1. 222. *Turt. v.* 1. 127.

THIS animal was cast on the coast at Friestone, in Boston-Deeps, on Feb. 15, 1800. It perfectly agreed with the name given by Linnæus, in having but one tooth, looking like a horn; but, on examining the upper jaw, it was very evident that the other tooth had been lost; and we have since seen a perfect skeleton of the head of this animal with the two teeth fixed in their proper sockets. The present specimen was 25 feet in length, and the tooth seven feet six inches. The teeth are spirally twisted, with a slight groove, terminating in a smooth point, as if worn down, and consist of very hard, compact ivory. Mouth rather small. Front of the head much rounded and blunt. Eyes black and small, considering the size of the animal, as in all the Order *Cete*. We observed the rudiment of a fin on the back, and a hard ridge near the tail. Black above from the nose to the tail, softened with streaky spots towards the sides, which are white, with a few spots. Belly white.

Fins black. The whole animal was covered with a black and white horny substance, like some kinds of tortoise-shell, composed of laminæ for an inch or more in depth. In the stomach were found the horny beaks of cuttle-fish in great quantity.

It was shown in Cockspur-street for some time, also at Cambridge. This animal is said to be most frequently found with only one tooth. It will occasionally pierce the bottom of a ship with its teeth; which circumstance may account for the frequent loss of one of them.





Feb.ry 1. 1805. Published by Jas. Sowerby, London

TAB. X.

PHALAROPUS Hyperboreus.

Red-necked Phalarope, or Coot-footed Tringa.

Class 2. Aves. *Order* 18. Pinnatipedes.

GEN. CHAR. *Bill* straight. *Nostrils* minute. *Toes* furnished with a broad and generally scalloped membrane.

SPEC. CHAR. *Male* gray, a white stripe on the wing, and white beneath the rump. Breast gray. Sides of the neck ferruginous. Eyelashes white. *Female.* Body gray beneath. Rump rufous. White stripe on the wing. Eyebrows and base of the greater wing-coverts reddish. Sides of the neck ferruginous.

SYN. Male. Tringa hyperborea. *Linn. Syst.* i. 249. 9. *Faun. Suec.* no. 179. (*descr. posterior.*) *Brun.* 172. *Mull.* 196. *Faun. Grœnl.* no. 75. *Gmel. Syst.* i. 675.

Phalaropus cinereus. *Briss.* vi. 15. 2. *Id.* 8vo. ii. 362.

Larus fidipes alter nostras. *Raii Syn.* 132. *a.* 7. *Willugh.* 270.

Le Phalarope cendré. *Buff.* viii. 224. *Pl. Enl.* 766.

Cock Coot-footed Tringa. *Edw. t.* 143.

Red Phalarope. *Br. Zool.* ii. no. 219. *t.* 76. *Lath. Syn. v.* 270. 1.

Female. Tringa fulicaria. *Linn. Syst.* i. 249. 10.
Faun. Grœnl. no. 76. *Gmel. Syst.* i. 676. 6.
Phalaropus rufescens. *Briss.* vi. 20. 4. *Id.* 8vo. ii. 363.
Le Phalarope rouge. *Buff.* viii. 225.
Red Coot-footed Tringa. *Edw. t.* 142.
Phalaropus hyperboreus. *Lath. Ind. Orn. v.* 2. 775.
T. W. Simmons's MSS.

This bird is 7 inches in length. Bill ¾ inch, black. Eyelids white. Tarsi black, compressed. Toes united as far as the first, second, and third phalanx of the inner, middle, and outermost toes respectively; the unconnected part of the toes webbed; margins of the web scalloped and pectinated. Claws black. The female differs from the male in having the head of a dusky black, and the throat of a white colour; also on the fore part a bright ferruginous spot, extending upwards on each side towards the head, but which is prevented from encircling the neck by a very narrow streak of a dark cinereous colour. This is continued from the head to the back. The dusky streaks on the back are fewer and paler. The cinereous colour is every where much darker than that of the male.

This species was procured in July 1803, at the edges of the fresh-water lochs in the Islands of Sunda and N. Ronaldsha.

Six females and two males were dissected, and remains of fresh-water insects were found in their stomachs. From the small size of the ovaria, and the length and thickness of the oviduct, it was concluded that the eggs had been lately laid. It was sufficiently evident from dissection that the

males were adult birds. From the deficiency of feathers on the breasts of the males, from their less bright plumage, and from the disproportion of their number to that of the females, it is not unreasonable to suppose that the males alone perform the business of incubation.

As none of the inhabitants had observed them, they had gained no provincial name, nor was it possible to ascertain whether they were residents, or summer birds of passage. It is much to be regretted that the search after their nests was not attended with the desired success.

The above description was taken from the MSS. of Mr. T. W. Simmons, by whom we were favoured with the specimens.

The figure was taken from a female specimen.

Feb.ʸ 1.1806. Published by Jas. Sowerby, London.

TAB. XI.

PAPILIO Charlotta.

Class 5. Insecta. *Order* 3. Lepidoptera.

SPEC. CHAR. Above dull orange, with black marks; nineteen silver spots on the lower wing beneath.

SOME years ago the Rev. Dr. Charles Abbott discovered this curious fritillary in Bedfordshire; and we do not know that it has been found by any one else. The 19 silver spots on the under part of the lower wing are very constant *. It is an elegant insect, well deserving an honourable name, and comes near to *P. Aglaia* in the System. As we have, comparatively speaking, but few Papilios in Great Britain, it is a very desirable acquisition. This gentleman likewise first added *P. paniscus* to the British list, and was so kind as to favour me with several pairs of them.

* There are several other differences, which may be observed in the figure.

Feb.y 1. 1805. Published by Jas. Sowerby, London.

TAB. XII.

AMPHITRITE Ventilabrum.

Class 6. Vermes. *Order* 2. Mollusca.

GEN. CHAR. *Body* projecting from a tube, annulated. *Feet* small, numerous. *Feelers* two, approximate, feathered. *Eyes* none.—*Turt.*

SPEC. CHAR. Fibres of the feelers ciliate on the inner edge, one feeler with 54 fibres, the other only 36. Proboscis none.

SYN. Amphitrite Ventilabrum. *Linn. Syst Nat. ed.* 13. *v.* 1. 3111. *Turt. Linn. v.* 1. 82.
Maltese Tubular Coralline? *Ellis's Coral.* 92. *t.* 34.*

OUR ingenious countryman Mr. Ellis, famous for his accurate work on Corallines, figured this animal from one found on the Maltese coast. We are obliged to Mr. T. W. Simmons for this specimen, taken in a net off Dysart, near Inch-Keith. The two coats are somewhat lacerated; but as we see more of the construction of the animal, it is so far an advantage. These coats are somewhat cartilaginous, and the outermost is roughest. It has 54 branches to the feeler on one side and 36 to that on the other.

* Ellis has made the case of one coat only, whereas it has two in our specimen.

TAPAJO Chevrolt.

March 1. 1805. Published by Tho. Sowerby, London.

TAB. XIII.

PAPILIO Chryseis.

Class 5. Insecta. *Order* 3. Lepidoptera.

SPEC. CHAR. *Male.* Wings orange above, with black margins, and a black spot on the upper ones, which are of a blue colour. Female, orange above, clouded and spotted with black. Both brown beneath, with 27 eye-like spots.

SYN. P. Chryseis. *Fab. Mant. Ins.* 2. 79. *n.* 725.
———— *Gmel. Syst. Nat. ed.* 13. *v.* 1. 2359. *n.* 815.
———— *Wein. Schmetterl.* 181. *n.* 3.

ANXIOUS that no discovery in Natural History should escape us, we are happy in presenting this insect to the public; and the valuable communications of our friends have helped us to many things that might have lain long dormant, or perhaps have been totally lost and forgotten.

This new British *Papilio* was caught by Mr. Plasted of Chelsea, in Ashdown forest, Sussex.

March 1.1806. Published by Jas Sowerby London

TAB. XIV.

PHALÆNA Catena.

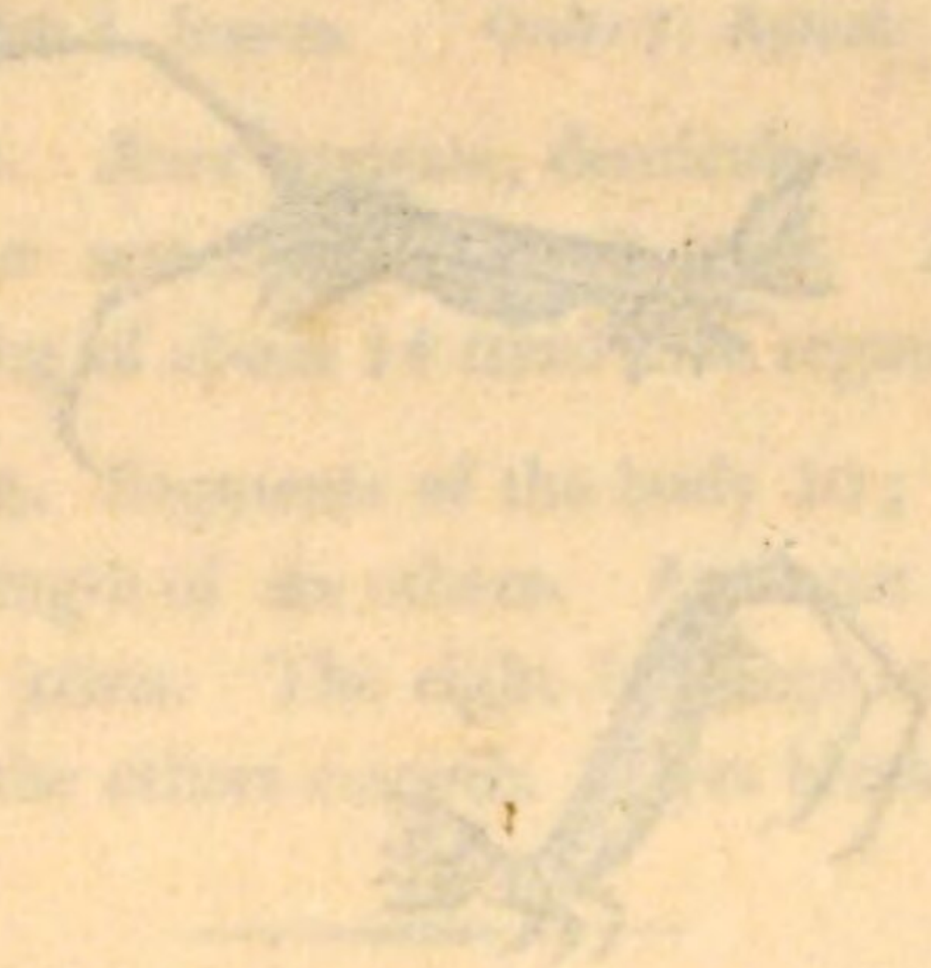
Class 5. Insecta. *Order* 3. Lepidoptera.

GEN. CHAR. *Antennæ* gradually tapering from the base to the tip. *Tongue* spiral. *Wings*, when at rest, generally deflected.

SPEC. CHAR. Wings white above, lateral margin brownish, with 7 white marks resembling a chain: upper margin with 2 brown spots.

THIS new moth was likewise taken by Mr. Plasted at Brixton, Surry. It is a very curious one, and has not yet been described by any author.

It comes among the *Noctuæ* in the *Linnæan System*.



March 1. 1805. Published by Jas Sowerby, London.

TAB. XV.

ONISCUS longicornis.

Class 5. Insecta. *Order* 7. Aptera.

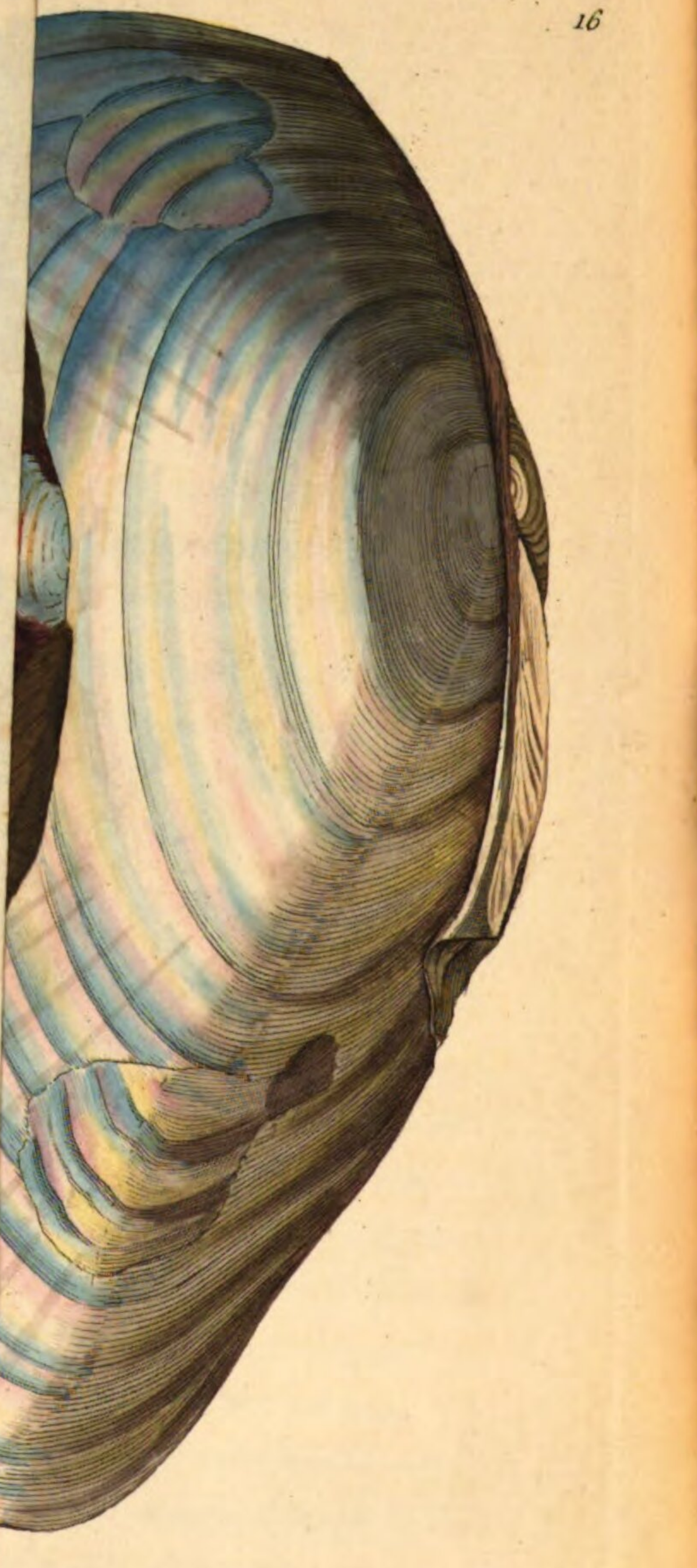
GEN. CHAR. *Jaws* truncate, denticulate. *Lip* bifid. *Antennæ* setaceous, from 2 to 4. *Body* oval, consisting of about 14 transverse segments.

SP C. CHAR. Segments of the body 10; the fourth is the length of six others. Antennæ consisting of five joints. The eight fore legs hairy in the inside, the others smooth. Eyes black.

BY Mr. T. W. Simmons's indefatigable industry, in laudably searching into the knowledge of the natural productions of Great Britain, whenever he had an opportunity, we are enabled to figure this species. He observed this strange-looking animal entangled in the nets off Dysart, near Inch-Keith.

It has an appearance that may often cause one to mistake the head for the tail: see *the upper figure*. In *the middle figure* it seems like a tumbler, or master of attitudes; in *the lower figure* it appears to be at rest.

The eggs are red, and adhere to the under side of the largest segment of the body.



TAB. XVI.

MYTILUS stagnalis.

Class 6. Vermes. *Order* 3. Testacea.

GEN. CHAR. *Animal* an Ascidia? *Shell* bivalve, rough, generally affixed by a beard of silky filaments; hinge generally without teeth, with an awl-shaped excavated longitudinal line.

SPEC. CHAR. Shell ovate, rather smooth, gibbous, with a flat space near the hinge.

SYN. Mytilus stagnalis. *Linn. Syst. Nat. ed.* 13. *v.* 1. 3362.

Mytilus maximus planior viridescens edentulus. *Schroet. fluviatil.* 159. *t.* 1. *f.* 1.

THE pair of shells from which these were drawn appear to be unique as British. They much resemble those of *Mytilus Cygneus*, but are however more gibbous, and more pointed on one side. There is also a flat space near the hinge towards the broader side. The description, in *Linn. Syst. Nat. ed.* 13, which follows, agrees nearly with our shell, and we make no scruple of considering them as the same:—"Like *M. Cygneus*, but the shell is much larger, being eight inches broad and four and half long, less convex*, greenish, with obscure green rays, and the margin is yellowish brown." In the copy of Schroeter at Sir Joseph

* This is the only part of the description which differs from our shell, which is more convex than *M. Cygneus*.

Banks's, the figure is larger than ours, but does not look too large in comparison to it: mine is measured by the edge of the shell, and is therefore accurate; but for something of a deception, not readily accounted for, it looks smaller than the real shell. There are in Schroeter's figure a few longitudinal stripes, which appear by the description to be too strong*. My kind friend, the Rev. Charles Sutton, A. M. of Norfolk, found it by the side of the lake in Kew Gardens which is now filled up. I have found smaller shells that nearly resemble, but I do not know of any pair like it as British.

* These stripes are common to most species of this genus.

March 1. 1805. Published by Jas Sowerby, London.

TAB. XVII.

TANTALUS Falcinellus?

Bay Ibis.

Class 2. Aves. *Order* 7. Grallæ.

GEN. CHAR. *Beak* long, subulate, roundish, subarcuate. *Face* naked. *Tongue* small. *Jugular pouch* naked. *Feet* four-toed, palmated at their bases.

SPEC. CHAR. Face black. Wings and tail dusky-green, shining. Body dark-chesnut, mixed with green above, beneath paler.

SYN. Tantalus Falcinellus. *Linn. Syst. Nat.* i. 241. 2. *Gmel. Syst.* i. 648. *Scop. Ann.* i. no. 131. *Kram. El.* 350. 2. *Borowsk. Nat.* iii. 72. 2. *Faun. Helvet. Lath. Ind.* 707.

Numenius viridis. *Bris.* v. 326. 4. *Id.* 8vo. ii. 293.

N. subaquilus. *Klein. Av.* 110. 8.

Falcinellus. *Raii Syn.* 103. 3. *Willugh.* 218. *t.* 54. *Id.* (*Angl.*) 295.

Le Courlis verd. *Buf.* viii. 29.

——— d'Italie. *Pl. Enl.* 819.

Bay Ibis. *Lath Syn.* v. 113. 12. *Arct. Zool.* ii. 460. A. *Id. Suppl.* 67.

DR. LAMB, who possesses this bird, and has been so good as to lend it us to figure, has also favoured us with the following account. It is the only British specimen known.

"Length 2 feet 6 inches. Breadth 3 feet 2 inches. Weight 18 ounces. Bill 5 inches long, incurvated, of a pale horn colour, rather darker and much thicker towards the base. Eyes as it were in the base of the bill. Irides dark. Face naked. Head and neck of a pale ferruginous colour, with fine transverse bars of white below the chin. General

plumage on the upper parts dusky black, glossed with green and purple. Wings and tail the same. The whole under parts much duller, with scarcely any bronze. Thighs rather paler, half way naked. Legs and feet long. Claws much crooked, the inside of the middle one pectinated. Legs, feet, and claws of a dingey black or horn colour.

"This Ibis was shot, September 28, 1793, while skimming with another over the river Thames, between Henley and Reading, and was supposed to be a bittern. I found nothing in his stomach but undigested plants. He had many pediculi, and a vast number of other small insects about him, which I sent to my learned friend and patron T. Marsham, Esq., Tr. L. S."

That this bird was held in the highest estimation amongst the antient Egyptians, is clearly demonstrated by the following account given of him by one of their kings:—

Καρδίαν βουλόμενοι γράφειν, Ἶβιν ζωγραφοῦσι, τὸ γὰρ ζῶον Ἑρμῇ ὠκείωται, πάσης καρδίας καὶ λογισμου δεσπότῃ, ἐπει καὶ ἡ Ἶβις αὔτὸ καθ' αὐτὸ τῃ καρδίᾳ εστὶν ἐμφερής· περι οὗ λόγος εστὶ πλεῖστος παρ' Αἰγυπτίοις φερόμενος.

Ὥρου Ἀπόλλωνος Νειλώου Ἱερογλύφικα. Ed. Par. 1551.

"When they wish to signify the heart they draw an Ibis; for that animal is dedicated to Mercury, the sovereign of every heart and thought; also because the Ibis *of itself** is very like the heart: about which much is said among the Egyptians."

We consider this as one of the same genus with the famous bird which the Egyptians worshipped, but not the identical species, about which there is so much dispute. This one is rather smaller than those preserved among the mummies. We are doubtful whether it is the same bird that Latham describes; for he says "pedibus cæruleis, alis caudaque violaceis," in his Specific Character. *Lath. Ind. Orn.* 2. 707.

* Or perhaps *folded up into itself*, that is, with its head under its wing, in which posture Ælian says that it resembles a heart.—R. T.

PAPILIONES.

CICINDELA hybrida.

April 1 1808. Published by Jas Sowerby, London.

TAB. XVIII.

CICINDELA hybrida.

Class 5. Insecta. *Order* 1. Coleoptera.

GEN. CHAR. *Antennæ* setaceous. *Palpi* six, filiform. *Jaws* prominent. *Eyes* large. *Thorax* rounded, marginated.

SPEC. CHAR. Purplish. Elytra with a lunulated spot at their base, an undulated white stripe in the middle, and a lunulated spot at the end of each.

SYN. Cicindela hybrida. *Linn. Syst. ed.* 13. *v.* 1. 1920. *Faun. Suec.* 747.* *Scop. Ent. carn.* 183. *Fab. Sp. ins.* i. 185. *n.* 6.

Cicindela maculata. *Degeer Ins. v.* 4. 115. *n.* 3. *t.* 4. *f.* 8. *Schœff. elem. t.* 43. *Icon. t.* 35. *f.* 10. *Bergstr. Nomencl.* i. 26. *t.* 4. *f.* 5.

MR. L. W. DILLWYN first found the two specimens of this new insect, one evening in May 1803, on the Crumlyn Burrows about three miles from Swansea. One of these specimens was accidentally lost, but my son G. B. Sowerby had the good fortune to find another next morning. These are all that have been taken of this beautiful insect, that we know of, in Great Britain.

Above purplish, beneath green gold. Thighs and legs bright red gold. Elytra punctulated, the hollows green gold, and risings purple gold. Suture and margin of the elytra purple gold. Face yellow. Jaws black, with an undulated stripe, and a lunulated spot at each end of each elytron.

TAB. XIX

April 1. 1808. Published by Jas Sowerby, London.

TAB. XIX.

APIS flavicollis.

Class 5. Insecta. *Order* 5. Hymenoptera.

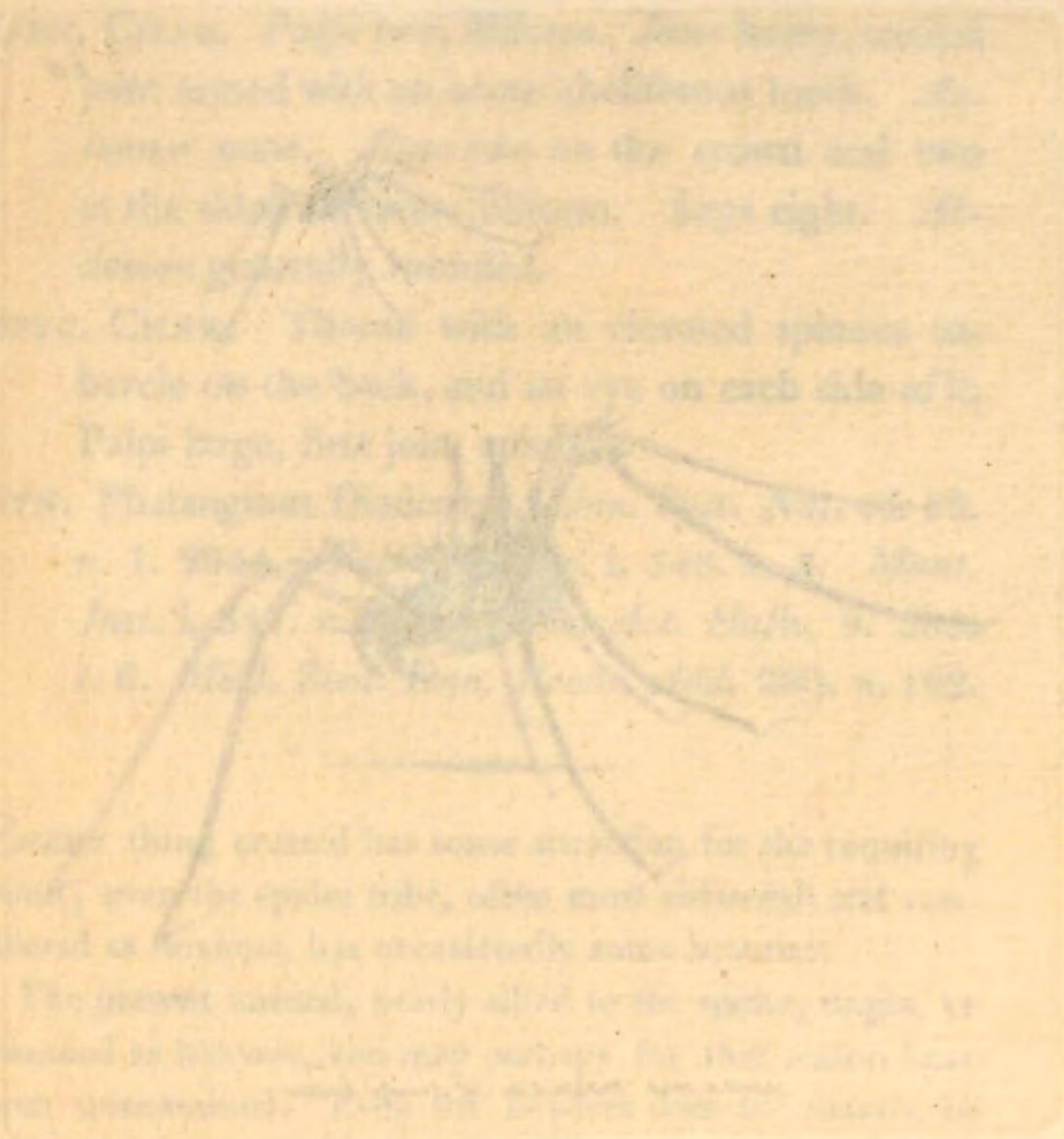
GEN. CHAR. *Proboscis* broken, inflexed. *Tongue* elongated, cylindrical, exserted. *Antennæ* middling; the males have 14 joints, the females 13. *Eyes* lateral, suboval, entire. *Wings* plain. *Sting* pungent, hidden.

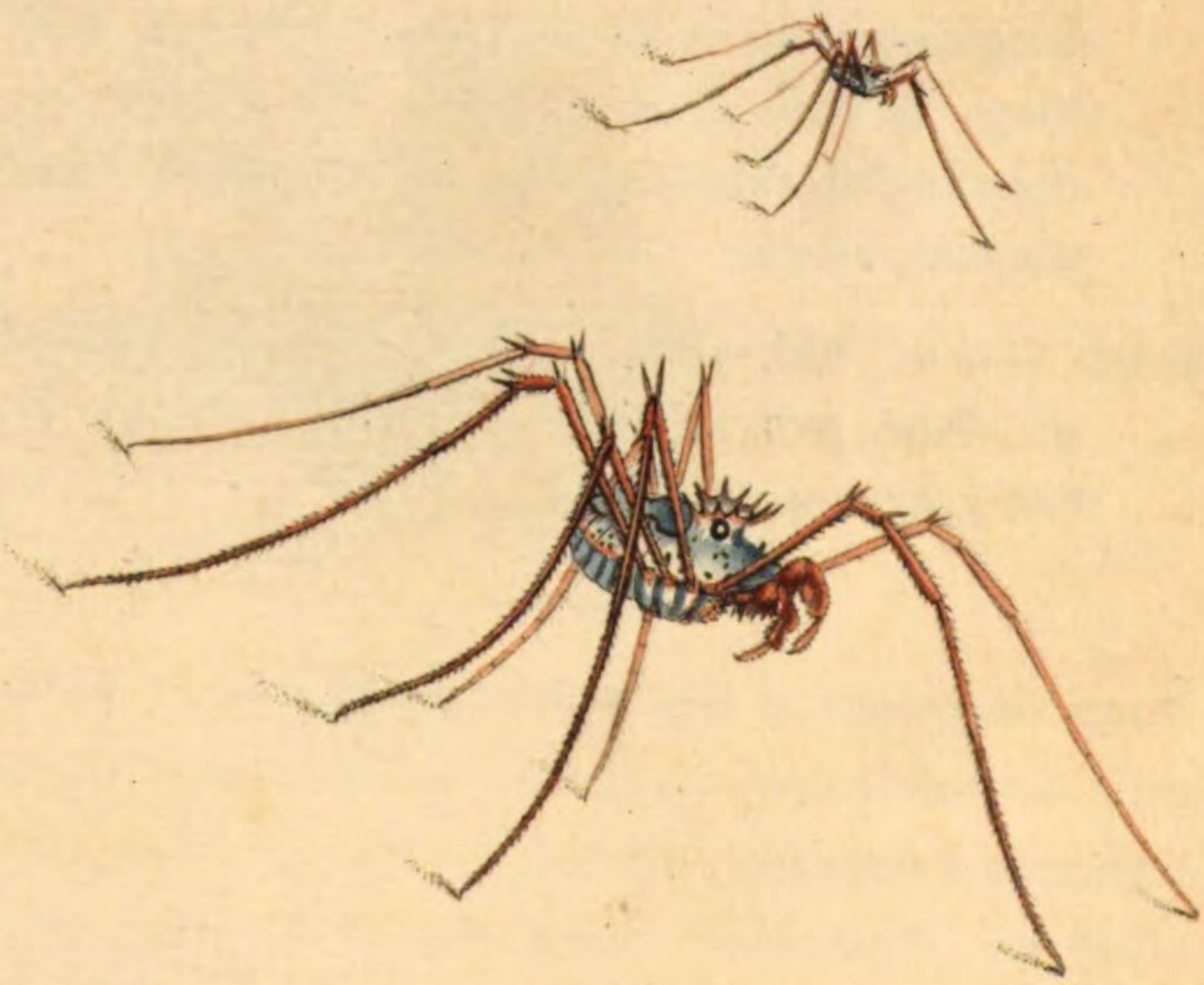
SPEC. CHAR. Hairy, black. Front of the thorax and scutellum pale yellow. Abdomen, all but the first joint, red. Anus black.

VERY few species of bees were described in Great Britain until that indefatigable and most excellent inquirer into all subjects of Entomology, the Rev. W. Kirby, F. L. S., published his *Monographia Apum Angliæ*, in which more than 220 species are noticed, of which 200 at least had not been before described as English. We now add another by the help of Mr. Jonathan Salt, of Sheffield. It is remarkable chiefly on account of the thorax being yellow.

TAB. XX.

PHALANGIUM DIADEMA.





April 2. 1805. Published by Jas. Sowerby, London.

TAB. XX.

PHALANGIUM Diadema.

Class 5. Insecta. *Order* 7. Aptera.

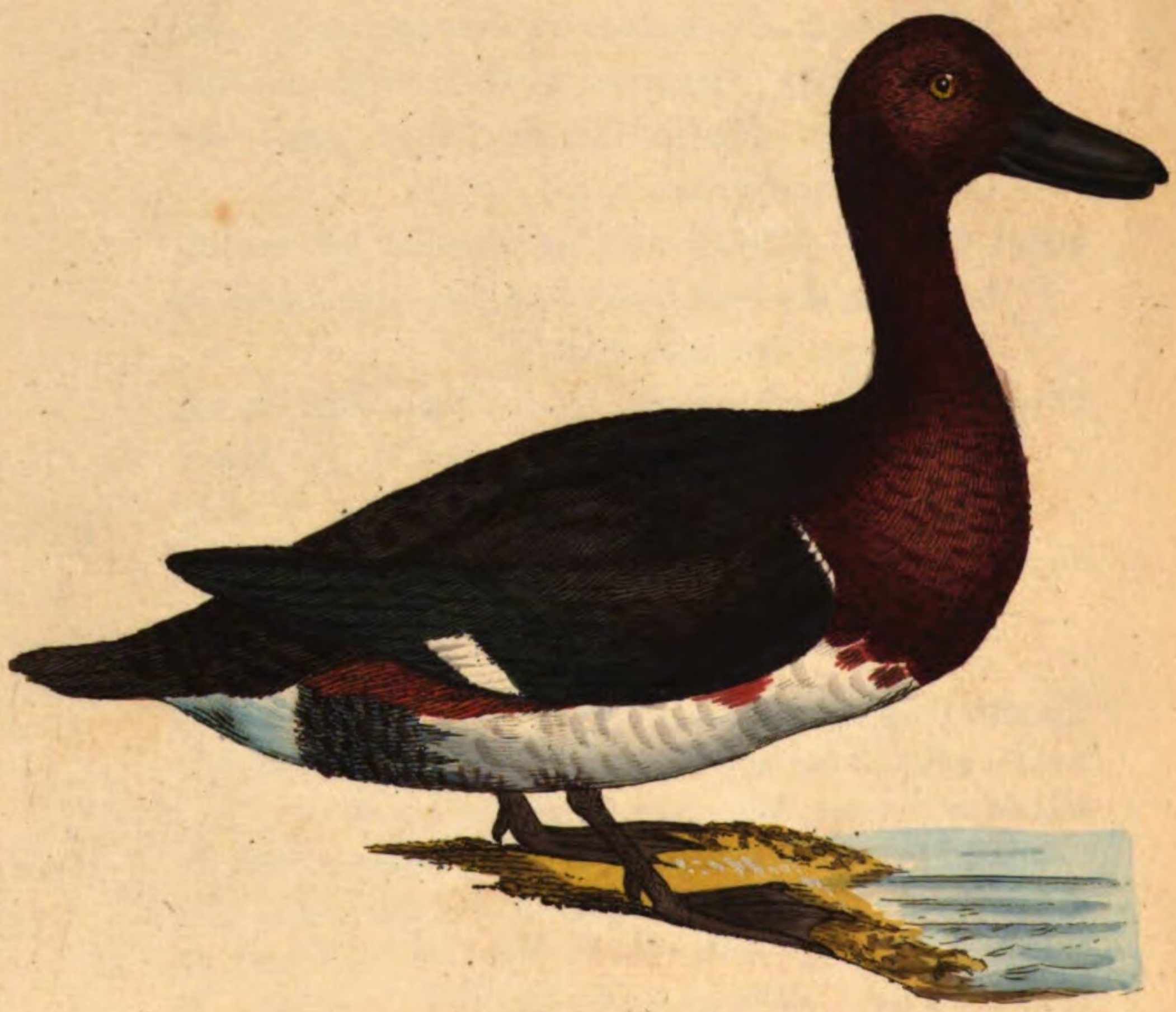
GEN. CHAR. *Palpi* two, filiform. *Jaws* horny, second joint armed with an acute cheliferous tooth. *Antennæ* none. *Eyes* two on the crown and two at the sides. *Feelers* filiform. *Legs* eight. *Abdomen* generally rounded.

SPEC. CHAR. Thorax with an elevated spinous tubercle on the back, and an eye on each side of it. Palpi large, first joint spinous.

SYN. Phalangium Diadema. *Linn. Syst. Nat. ed.* 13. *v.* 1. 2944. *Fabr. Sp. Ins.* i. 548. *n.* 5. *Mant. Inst.* i. 347. *n.* 5. *Stroem. Act. Hafn.* 9. 583. *t.* 6. *Müll. Zool. Dan. Prodr. Add.* 280. *n.* 192.

EVERY thing created has some attraction for the inquiring mind; even the spider tribe, often most abhorred, and considered as noxious, has occasionally some beauties.

The present animal, nearly allied to the spider, might be shunned as hideous, and may perhaps for that reason have been unexamined. Even the Diadem does not remove its grim appearance, although it adds greatly to its oddity. It has however been recognised abroad, but not in Great Britain, as far as we know, until my eldest son, James Sowerby, found it on oak-trees in Hainault forest in 1802, and G. B. Sowerby in 1803 in South Wales, on dripping rocks at a water-fall called *Usgoed-Eynon-Garn*.



May 2. 1808. Published by Jas. Sowerby, London

TAB. XXI.

ANAS Nyroca.

Olive-tufted Duck.

Class 2. Aves. *Order* Anseres.

GEN. CHAR. *Beak* with lamellar teeth, convex, obtuse. *Tongue* ciliated, obtuse.

SPEC. CHAR. Blackish olivaceous. Head, throat, breast, and flanks chesnut. Belly whitish. Rump black. Vent snowy.

SYN. Anas Nyraca. *Guldenstœdt Nov. Comment. Petrop.* xiv. 1. 403.

Anas Nyroca. *Gmel.* 1. 542. *Turt.* 1. 332.

THIS bird, by Dr. Latham, has been thought a variety of the Tufted Duck, *Anas fuligala*; but he appears not to have seen it. The bill seems partly to warrant his opinion; but if any thing is to be depended on in the plumage, we must consider it a different species. It was sent from Yarmouth by our friend D. Turner, Esq.

May 2. 1805. Published by Jas. Sowerby, London.

TAB. XXII.

ZEUS Opah.

Opah, or King-fish.

Class 4. Pisces. *Order* 3. Thoracici.

GEN. CHAR. *Body* very deep, compressed sideways, consisting of seven branchiostegious rays.

Generally with very long filaments from the first dorsal fin.

SPEC. CHAR. Tail bifurcate, red, dorsal fin 1. anal fin 1. Fins red. Back green. Sides pale red, with silvery and golden spots.

SYN. Opah, or King-fish. *Phil. Trans. Abr.* xi. 879. *t. 5. Penn. Brit. Zool. 3. 223.*

Zeus cauda bifurca, colore argenteo purpureo splendens. *Strom. Sondmor. 323. 325. t. 1. f. 20.*

WE know of no coloured figure of this most singular and beautiful fish, which seems only an inhabitant, and a very rare one too, of our seas; so strikingly beautiful are its lustre and colours that all are amazed with its splendour at first sight.

The fishermen who are so lucky as to procure these fish, have always made a show of them. A few only at different periods have been seen, viz. not more than seven or eight.

The present specimen was found near Weymouth, and was procured for me, as soon as the fishermen would part with it, by my friend S. P. Bryer, Esq., of that place.

The back fin at its origin is very high, but slopes very suddenly towards the tail, where it grows rather higher.

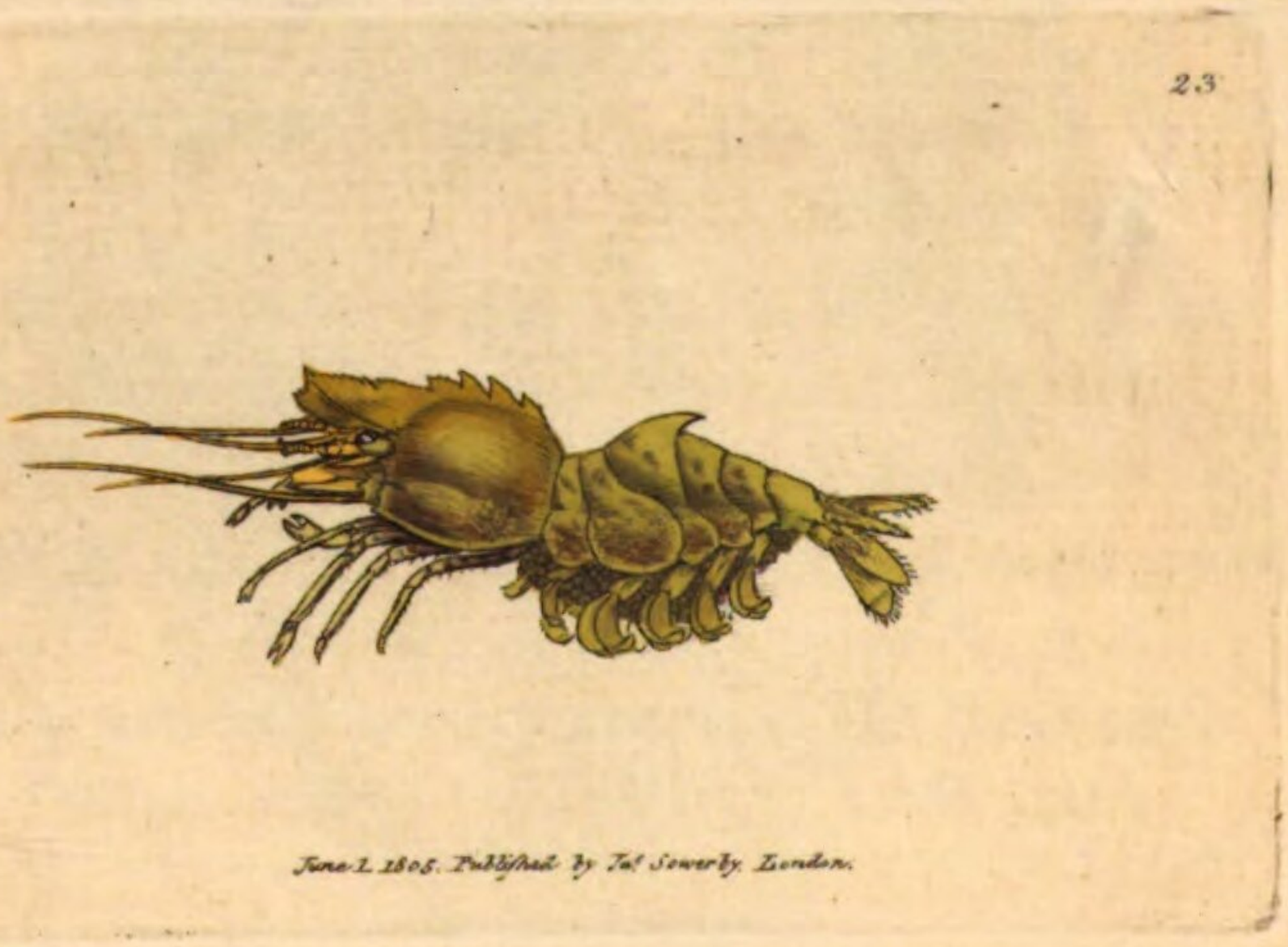
Anal fin long.

These animals measure from 3 to 5 feet, and weigh from 70 to 140 pounds.

It seems most proper to retain the generic name *Zeus*, as it pretty well agrees with it. It is rather astonishing that Linnæus, Gmelin, or Turton do not mention it.

TAB. XXII.

CANCER Spinus,
Spine-backed Shrimp.


23
June 1. 1805. Published by Jas Sowerby. London.

TAB. XXIII.

CANCER Spinus.

Spine-backed Shrimp.

Class 5. Insecta. *Order* 7. Aptera.

GEN. CHAR. *Feet* 8 (rarely 6 or 10). *Claws* 2. *Palpi* 6 unequal. *Eyes* 2, distant, generally pedunculated, elongated, moveable. *Jaws* horny, thick. *Lip* triple. *Tail* jointed, unarmed.

SPEC. CHAR. Thorax with a serrated ridge and a tooth on each side of it. Third joint of the abdomen with a spine.

WE should be glad, by Mr. Simmons's example, to awaken the zeal of naturalists, that we may have the pleasure to see our native rarities made public. It is a laudable endeavour to inquire into what we possess, and in time many useful discoveries may ensue. The present species would, by its extraordinary yet certainly curious formation, never tempt any one; yet custom, and the delicacy of most of the genus as a viand, have made it agreeable to many, nor do we know of any that are liable to be particularly hurtful, for the supposed danger from a crab in the muscle is a vulgar error.

(The wolf-fish, at Scarborough, is despised for its clumsy and voracious-looking jaws; but, though ugly in appearance, it is equal to most fish in the opinion of the unprejudiced.)

We have only seen this one of the present species, therefore little is known but of its formation; and that soon attracts the attention, as peculiarly different from the common forms.

Mr. Simmons discovered this species among oysters on the Scottish coast.

June 1. 1805. Published by Jas Sowerby, London.

TAB. XXIV.

ASTERIAS endeca.

Nine-rayed Star fish, or Sea Star.

Class 6. Vermes. *Order* 2. Mollusca.

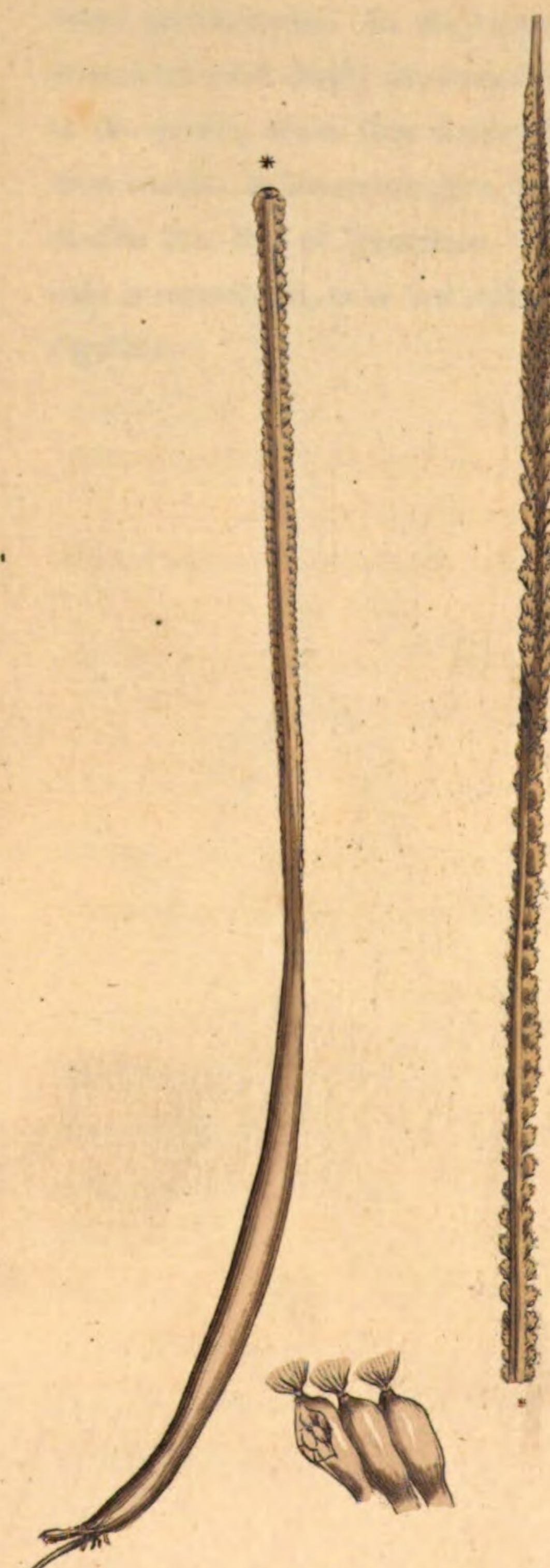
GEN. CHAR. *Body* depressed, covered with a muricated coriaceous crust, sulcated beneath, with tentacula. *Mouth* central, 5-valved.

SPEC. CHAR. With 9 rays, everywhere covered with pectinated tubercles.

SYN. Asterias endeca, *Gmel. Syst. Nat. v.* 1. 3162.
β. Rumph. Mus. t. 15. *f.* F.

WE are indebted to the zeal and friendship of James Brodie, Esq., F. L. S., for the first discovery of *Asterias endeca* as a native of Great Britain. It was alive when he picked it up on the Nairn coast, in the Moray Firth. It is remarkable for the number of rays being mostly nine, and generally in the same position, in fives, threes and ones. They are thus represented in Rumphius's figure, and are so in my specimen; but are said occasionally to vary in number. The back is regularly covered with small, rough, somewhat pectinated tubercles, and the body has nine prominences placed a little above and between the divisions of the rays. It is of a purplish brown colour. The under side is lighter coloured,

and the edges of the rays have two rows of smaller pectinated prominences. In the centre of the rays the prominences are more deeply pectinated, opposite, and continuing to the mouth, where they divide a little, and the centre is more simple. It has seemingly a fleshy lip. Our specimen is smaller than that of Rumphius. The concordance of attitude is remarkable, as at first sight there does not seem any regularity.



July 2. 1805. Published by Jas Sowerby, London.

TAB. XXV.

PENNATULA mirabilis?

Slender Sea Pen.

Class 6. Vermes. *Order* 4. Zoophyta.

GEN. CHAR. *Animal* not affixed, of various shapes, supported by a bone running through the middle, naked at the base, the upper part generally with lateral ramifications, furnished with rows of tubular denticles, producing radiate polypes from each tube.

SPEC. CHAR. Stem filiform, with lunate, denticulated, alternate ramifications at the top, growing smaller towards the bottom, which is naked.

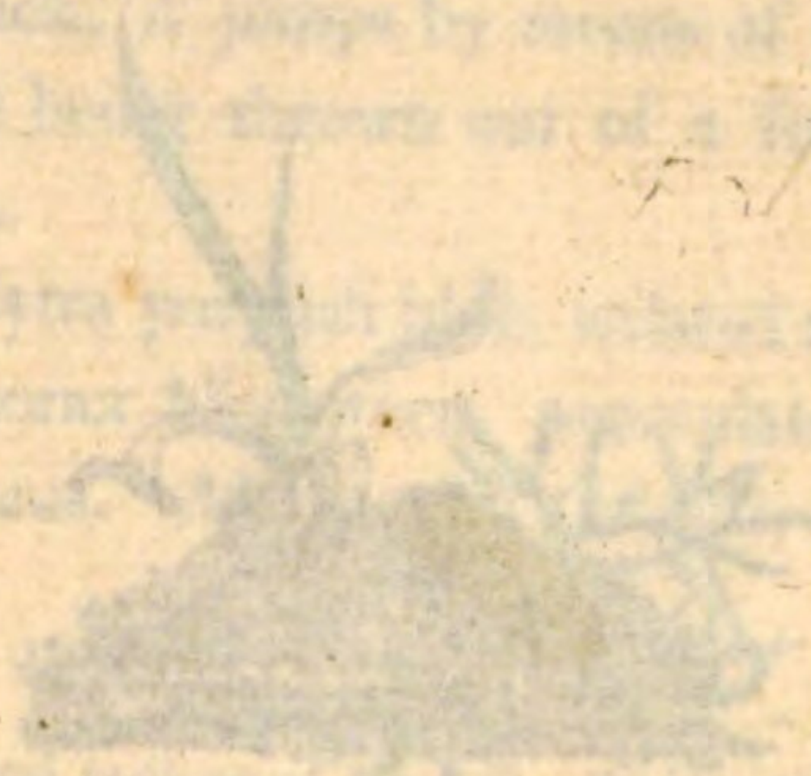
SYN. Pennatula mirabilis. *Gmel. Syst. Nat. v.* 1. 3865.

THE natural construction of these animals is curiously imitative of a quill not stripped of its feathers, in most of the species; but the one before us seems to represent a quill stripped of its feathers. The base looks like a pen in this as well as in the other species, swelling a little from the end, and then tapering. The upper part is thicker, with alternate semicircular pectinated swellings, larger towards the middle, tapering upwards, and terminating in a thin bony

substance, which passes through the whole. We are not sure that this is the true *P. mirabilis* of Linnæus, as the figures quoted will not allow us to be so. It is apparently very rare as British; for I do not know of any but the one in our possession dredged up by Mr. Simmons off Inch-Keith, and presented to me by James Brodie, Esq. F. L. S.

TAB. XXVI.

BLATTA CYRTOPS.



June 1. 1805. Published by Jas Sowerby, London

TAB. XXVI.

ELATER cyaneus.

Class 7. Insecta. *Order* 1. Coleoptera.

GEN. CHAR. *Antennæ* filiform, often serrated. *Head* small, inserted. *Thorax* oblong, rather convex, in the front attenuated, with a prominent angle behind on each side. *Body* elongated: being laid on its back, it jumps by means of a mucron on the breast being thrown out of a foramen in the abdomen.

SPEC. CHAR. Elytra purplish blue, striated and punctulated. Thorax blue green, punctulated.

SYN. Elater cyaneus. *Marsham's Coleopt.* 388.

THIS insect has been reckoned British, and is esteemed as such in the best works on Coleopterous Insects; although a habitat has not been pointed out. It however was found about three years ago by our friend Mr. Dawson under a stone in the King's Park at Edinburgh, and is perhaps the handsomest of the Elater Genus indigenous to this Island.

Head and thorax shining blue green. Elytra bright blueish purple, very finely punctulated. Beneath dull green. Legs dull green. Antennæ black.

Oct.r 2. 1804. Published by Jas. Sowerby, London.

TAB. XXVII.

CARABUS nitens.

Class 7. Insecta. *Order* 1. Coleoptera.

GEN. CHAR. *Antennæ* filiform. *Thorax* obcordate, behind truncated, marginated. *Elytra* marginated. *Abdomen* ovate. *Hind-thigh* with an appendage at the base.

SPEC. CHAR. Apterous. Elytra porcated: with interrupted striæ, and scabrous gólden sulcæ.

SYN. *Marsh. Coleopt.* 435. and Synonyms.

HAVING seen foreign specimens of this beautiful Insect, some years since, and being told that it was to be found in Great Britain, I was anxious to know the habitat; but the most able entomologists at that time could not satisfy me: even Mr. Marsham was unacquianted with it. However, anxious to collect every thing relating to the Natural History of Great Britain, I had desired my friend, the Rev. J. Harriman, to send me Insects as well as Plants, whether common or uncommon; and it soon after, about the year 1800, happened that this came in a box of his with a Lichen. As Mr. Marsham's work was not then in the press, I immediately inquired of Mr. Harriman concerning it, who said it was not uncommon on the heaths of Durham. I gave Mr. Marsham the information, but he has omitted it.

I have since seen a specimen at Lady Wilson's, who also found it in that county. We therefore venture to figure it as a new and rare insect to most entomologists, and especially as most cabinets have only foreign specimens.

Head, thorax, abdomen, legs and antennæ black beneath. Head and thorax red gold above, with a green glare. Elytra sulcated. Sulcæ sometimes interrupted. The ridges black. The hollows green gold. Margin Elytræ gold coloured.

June 1. 1805. Published by Jas. Sowerby, London.

TAB. XXVIII.

PHALÆNA N. Bractea.

The Gold Spangle Moth.

Class 7. Insecta. *Order* 3. Lepidoptera.

SPEC. CHAR. Wings variegated, with a large golden shining spot in the middle.

SYN. Phalæna Bractea. *Elements of Nat. Hist.* 2. 186. *no.* 197.

THE specimen from which our figure is taken, is in the collection of A. MacLeay, Esq., Sec. L. S., who received it from Mr. Charles Stewart, A. L. S., the ingenious author of the Elements of Natural History, and is the identical specimen described in that work. It was taken in the neighbourhood of Edinburgh.

TAB. XXIX.

PHALÆNA N. *Eulem.*

Yorkshire burnished Dean Moth.

Aug.st 1. 1805. Published by Jas. Sowerby, London.

TAB. XXIX.

PHALÆNA N. Ærifera.

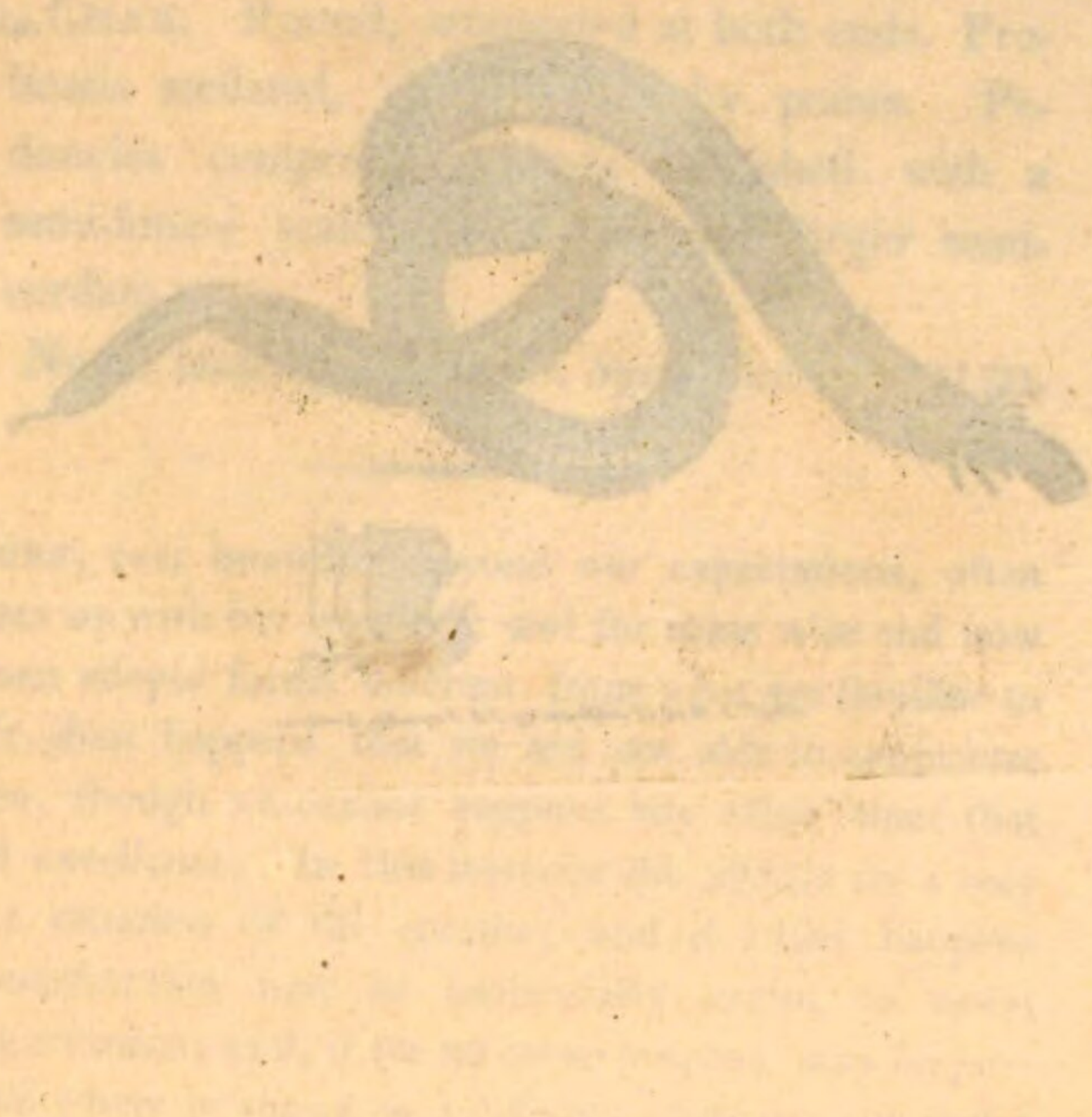
Yorkshire burnished Brass Moth.

Class 7. Insecta. *Order* 3. Lepidoptera.

SPEC. CHAR. Crested, anterior wings dark brown, with a large brassy spot near the apex.

SYN. Noctua Bracteina. *Prod. Lepidopt. Brit.* 16. *no.* 103.

THIS Insect has long been known to the English Aurelians by the name of the Yorkshire burnished Brass Moth, but does not appear to have been hitherto described, in consequence of its having been always mistaken for *P. Bractea*, figured in the preceding Plate.



Aug.t 1 1805. Published by Jas Sowerby London.

TAB. XXX.

NEREIS lamelligera.

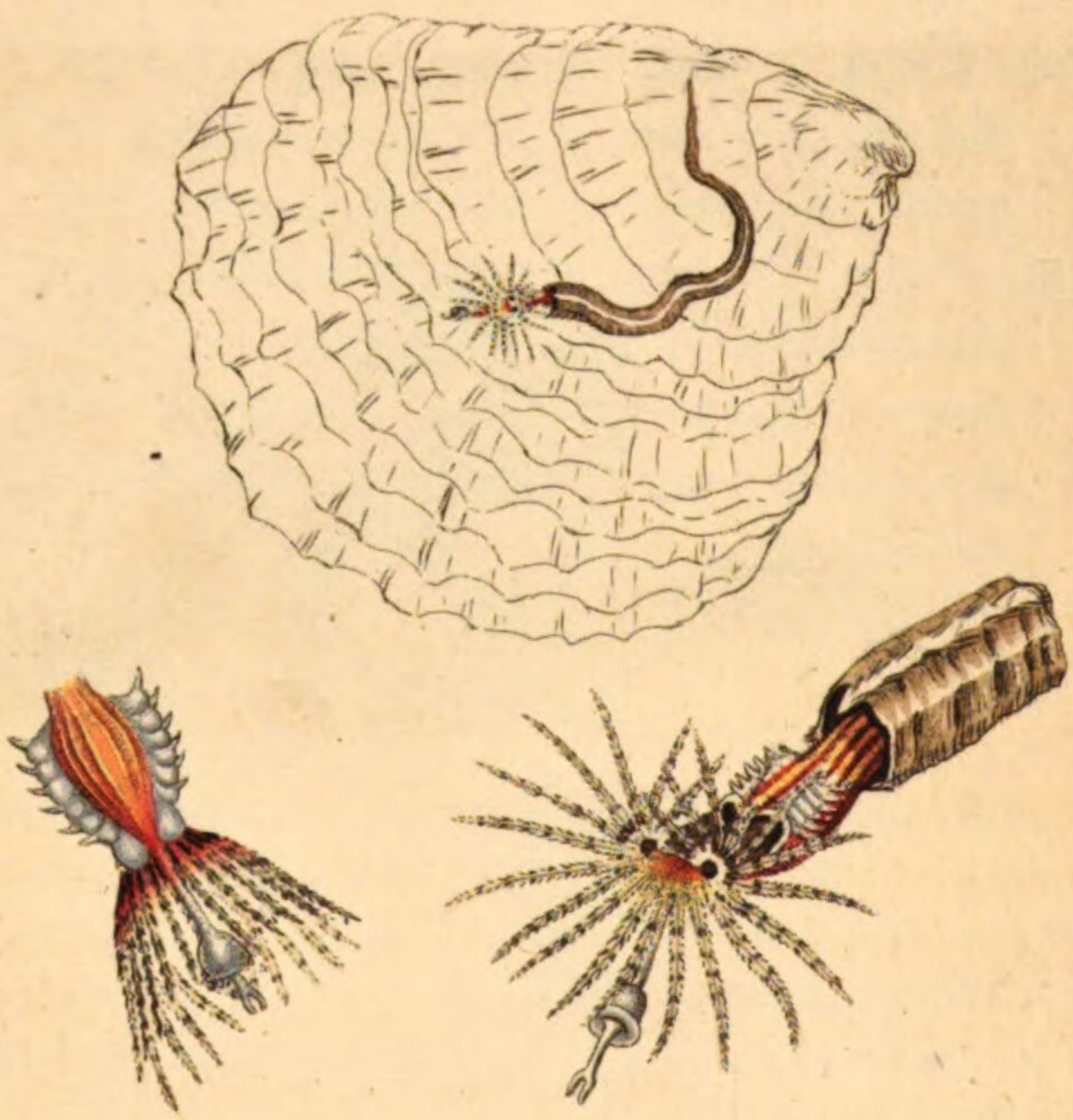
Class 6. Vermes. *Order* 2. Mollusca.

GEN. CHAR. *Body* creeping, long. *Lateral peduncles* pencilled. *Tentacula* simple, rarely none. *Eyes* two or four, rarely none.

SPEC. CHAR. Round, attenuated at both ends. Proboscis stellated, with four fleshy points. Peduncles compressed, above furnished with a semi-lunate scale, beneath with a larger semi-cordate one.

SYN. Nereis lamelligera. *Gmel. Syst. Nat. v.* 1. 3120.

NATURE, ever bountiful beyond our expectations, often surprises us with her wonders; and for some wise end now and then adopts forms different from what are familiar to us. It often happens that we are not able to conjecture her aim, though we cannot suppose any other than that of real excellence. In this instance she affords us a very distinct criterion of the species; and it often happens that construction may be particularly useful to assist our discernment; and, if for no other purpose, may be providential where it shows us a difference between the useful and the noxious. We are not yet acquainted with any uses among the Nereises, therefore can at present only mention the appendages to which we allude as a means of specific difference. We know of no great difference in the construction of the other parts from the other Nereises. It it found two feet long on other coasts.



Augt 2. 1805. Published by Jas Sowerby. London.

TAB. XXXI.

SERPULA triquetra.

Class 6. Vermes. *Order* 3. Testacea.

GEN. CHAR. *Animal* a terebella. *Shell* univalve, tubular, generally adhering to other substances; often separated internally by divisions at uncertain distances.—*Turt.*

SPEC. CHAR. Shell creeping, flexuous, triangular.

SYN. Serpula triquetra. *Turt. Linn. v.* 4. 603.

THOSE who find recreation in admiring the works of Nature are seldom at a loss for amusement, and the most common circumstances of our lives bring into our way something or other to excite curiosity. The present little animal was observed fixed to an oyster shell, occasionally protruding itself from its own curious shell. I put it into some salt and water and preserved it some hours, and occasionally watched its motions; which being somewhat slow, gave me an opportunity to examine it more thoroughly, and I was in hopes of seeing it work. The instrument like a proboscis with a bell-shaped end, which is but seldom exposed, seemed adapted for assisting in making the case: this however is only conjecture, as we could not comprehend any thing like the certain use of it. At length

the animal became enfeebled and nearly dead, with this instrument extended. I therefore put a piece of paper gently under it, and took it from the water, and dried it with this organ in good preservation. The other parts were also in great perfection; and as I did not know such another opportunity would offer, the sketch was finished at the time. The feelers put us in mind of the nectariferous rays in a *Passiflora*.

Aug.st 1. 1805. Published by Jas. Sowerby, London.

TAB. XXXII.

CARDIUM spinosum.

Class 6. Vermes. *Order* 3. Testacea.

GEN. CHAR. *Animal* a Tethys. *Shell* bivalve, nearly equilateral, equivalve, generally convex, longitudinally ribbed, striated or grooved, with a toothed margin: hinge with 2 teeth near the beak and a large remote lateral one on each side, each locking into the opposite.—*Turt.*

SPEC. CHAR. Tender, obliquely sub-cordate, one side truncate, with 20 prominent ridges, armed with long, sharp, flat spines.

THIS very neat, elegant, and curious Cockle seems, by some mistake, to have escaped the vigilance of most authors, as it does not agree with either the *Cardium echinatum* or *C. aculeatum*.

Our shell is not often found, but among many shells and fragments from Torbay on the Devonshire coast, I met with only one perfect valve*. It nearest resembles the *C. aculeatum* as to the general contour; but is always a more delicate and tender shell; the truncation is more abrupt, and forms a right angle with the line of the hinge.

* Mr. Humphrey supplied me with the specimen figured from the same coast. Col. Montague informs me that he has found them on the Devonshire coast.

The spines are more truly aculeate, or like the prickle on a rose-stalk, somewhat flattened longitudinally with the shell, seldom contrary, as in the other shells. The larger spines have a canal or narrow furrow; in the other species they are often dilated, especially at the narrow side. The spines on the narrow side are all curved towards the hinge, and on the broadest side they are curved from the hinge.

We are confirmed in our opinion of its being a species, by seeing fine specimens in Lady Wilson's cabinet, and a large one which Dr. Grey was so good as to show us at the British Museum. The latter is at present without a name, and is as large as *C. aculeatum* is commonly found*; otherwise the spines near the hinge of *C. aculeatum* might lead us to think them the same species.

* Above twice the size of the Figure, with all the spines flat.

TAB. XXXII.

Fig. 1.—AMMOPHILA hirsuta.

Hairy Sandwasp.

Class 6. Insecta. *Order* 5. Hymenoptera.

GEN. CHAR. *Nostrum* cradle-shaped, bilobed, concealing a bifid tongue. *Antennæ* filiform, in both sexes, joints about 14. *Eyes* oval. *Wings* plain. *Sting* concealed in the abdomen.

SPEC. CHAR. Antennæ of 13 joints. Petiole of the abdomen short, of 1 joint. Wings equal in length to the body.

SYN. Ammophila hirsuta. *Linn. Dyct.* 1020.

Fig. 2.—AMMOPHILA pulvillata.

SPEC. CHAR. Antennæ of 14 joints. Petiole of the abdomen of 1 segment. Wings shorter than the body. Pulvilli elongated, bifid.

Aug.st 1803. Published by Jas Sowerby, London.

TAB. XXXIII.

Fig. 1.—AMMOPHILA hirsuta.

Hairy Sandwasp.

Class 6. Insecta. *Order* 5. Hymenoptera.

GEN. CHAR. *Rostrum* conical, inflexed, concealing a bifid tongue. *Antennæ* filiform in both sexes, joints about 14. *Eyes* oval. *Wings* plane. *Sting* concealed in the abdomen.

SPEC. CHAR. Antennæ of 13 joints. Petiole of the abdomen short, of 1 joint. Wings equal in length to the body.

SYN. Ammophila hirsuta. *Linn. Trans.* 4. 206.

HEAD large, punctulated, black, villose. Maxillæ the length of the head, very menacing. Thorax and breast villose. Squamæ black. Wings the length of the body, subhyaline; apex black; veins ferruginous; marginal spot fuscous. Abdomen black, lanceolato-ovate; petiole short, villose; second, third, and base of the fourth segments reddish brown. Hind legs half as long again as the abdomen. Tarsi very rough with bristles.

Fig. 2.—AMMOPHILA pulvillata.

SPEC. CHAR. Antennæ of 14 joints. Petiole of the abdomen of 2 segments. Wings shorter than the body. Pulvilli elongated, bifid.

HEAD black, villose. Antennæ nearly the length of the thorax. Front plane, beneath the antennæ, covered with

dense, decumbent, very bright, shining, silvery hairs. Thorax narrow, subvillose, on each side of the breast a bright silvery spot. Squamæ black. Wings subhyaline; apex obscure; nerves ferruginous, about half the length of the abdomen. Abdomen clavate; first segment filiform, black; second segment filiform, reddish; third and fourth reddish, apex of the fourth black; the other segments black with a blue glare. Feet rough with short bristles. Pulvilli elongated, bifid.

The two species above described were taken at Reading in Berkshire, and communicated to us by our friend Mr. James Murray.

Ammophila pulvillata agrees in many characters with *A. argentea* of the Rev. W. Kirby's ingenious paper in the *4th vol. of Linn. Trans.* p. 208; but its having two segments to the petiole of the abdomen is understood to be a sufficient specific difference, as well as the remarkable length of the pulvilli, and some difference in the general appearance. The uses of these insects, as far as we know, accord with those of many others of the Hymenopterous order. They are found to be great enemies to the caterpillars, which, but for these and other means which nature provides, might be more mischievous than they are; and we may one day find out, by knowing the different species, those which are most useful, so as to make ample amends for the trouble of investigation. The great Ray and Mr. Curtis have had opportunities of detecting them in the act of contriving the preservation of their future progeny. They cause the destruction of caterpillars much larger than themselves, by preparing, at a certain season, a hole in a generally sandy sunny bank, and dragging the caterpillar into the hole, having deposited their egg or eggs in the body of it, that when the egg is hatched there may be a supply of food for the larva, after which they close up the hole, thus burying them alive as food for their progeny.

TAB. XXXIV.

SCARABÆUS.

Aug.t 1. 1805. Published by Jas. Sowerby, London.

TAB. XXXIV.

SCARABÆUS ovalis.

Class 7. Insecta. *Order* 1. Coleoptera.
Div. 1. Terrestres, Scutellati.

GEN. CHAR. *Antennæ* clavate, capitulum fissile. Front feet often dentated.

SPEC. CHAR. Oval, black. Legs pitch-coloured, short, thick, dentated. Elytra sulcated.

AMONG other new British Insects which my son found in South Wales is this little Scarabæus from the sandhills, or burrows, called Skitty burrows, near Swansea. It is not remarkable for its beauty; but any subject in Natural History may be so for its locality, and in such case may be found useful, not merely as regarding itself, but the nature of the climate, soil, and other circumstances. We do not know of any place besides in Great Britain where it has been found, except at Christchurch, by the Rev. W. Bingley.

PLATE XXXV.

Fig. 1.—SCARABÆUS opaciger.

Fig. 2.—S. furcifer.

1.

2.

Augst 1.1805. Published by Jas Sowerby London.

TAB. XXXV.

Fig. 1.—SCARABÆUS spiniger.

SPEC. CHAR. Black. *Thorax* with an impressed spot on each side, hind thighs bidentated.

SYN. Sc. spiniger. *Marsham's Coleopt.* 21.

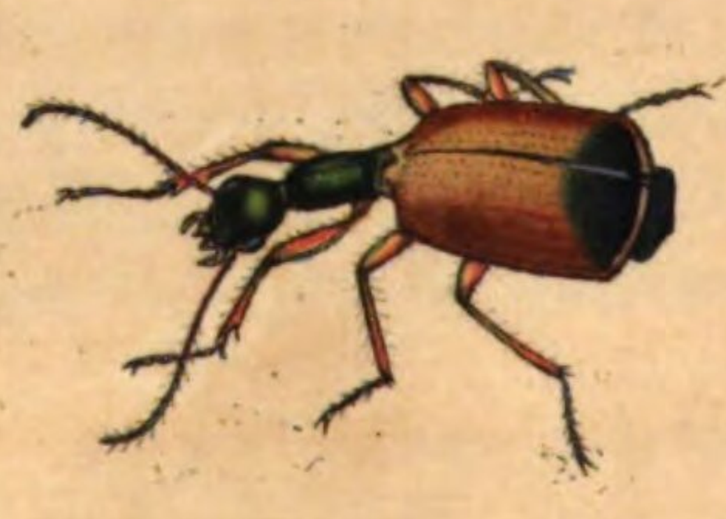
STALK of the antennæ pitch-coloured. Capitulum blackish. Thorax obscure, excavato-punctated on each side, with a larger impressed spot; hind part of the thorax with an intermediate line, about half way composed of excavated spots. Scutellum longitudinally subdepressed in the middle. Elytra obscure, striated, striæ subpunctated. Hind thighs armed with two teeth, of which the exterior is largest, and the interior is a continuation of the appendage at the base of the thigh. Fore thighs, which is very singular in this genus, are three-sided and seven-toothed, third tooth upright. —*Marsham.*

Fig. 2.—S. foveatus. *Marsh. Coleopt.* 21.

SPEC. CHAR. Black. Elytra sulcated. Thorax with two excavated spots on each side. Scutellum violaceous.

VERY like the preceding; but the thorax has four excavated spots: the disc slightly and the sides strongly punctulated. Scutellum violaceous. Margin of thorax and elytra atro-cœrulescent. Hind thighs furnished with 1 or 2 teeth. Fore feet sexdentate. Tarsi pitch-coloured.—*Marsham.*

Our figure is from a specimen in the cabinet of A. Mac Leay, Esq.



Augst. 1. 1805. Published by Jas. Sowerby. London.

TAB. XXXVI.

CARABUS rotundicollis.

Class 6. Insecta. *Order* 1. Coleoptera.

SPEC. CHAR. Head and thorax bright green gold. Elytra pale brown with a large black spot at the end.

THIS pretty insect was found on Crumlyn bog, by Mr. Joseph Woods, F. L. S., whom my son accompanied in a little excursion to South Wales, in 1803.

Base of the antennæ brown, end black. Head, thorax, and abdomen blue green gold. Elytra, sternum, and legs brown. Apex of the thighs and base of the elytra black.

TAB. XXXVII.

MELALEÑA. D. douglasi.

36

37

Aug.st 1 1805. Published by Jas. Sowerby, London.

TAB. XXXVII.

PHALÆNA B. oleagina.

SPEC. CHAR. Crested. Antennæ pectinated. Upper wings above variegated, with dark brown, lighter brown, and white; nerves yellow green, a white spot near the middle of each wing, and an obscure whitish ring, with a lightish blot below it, nearer the shoulders. Lower wing light brown, margin dark brown. Wings dentate beneath, light brown, margin brown, a black spot in the middle of the lower wing.

THIS new British Moth was bred by Mr. Plasted of Chelsea, who does not remember where he took the caterpillar. It very much resembles *P. N. Persicariæ;* but the antennæ being feathered help to distinguish it.

Oct. 1. 1805. Published by Jas. Sowerby, London.

TAB. XXXVIII.

MELITTA nigro-ænea.

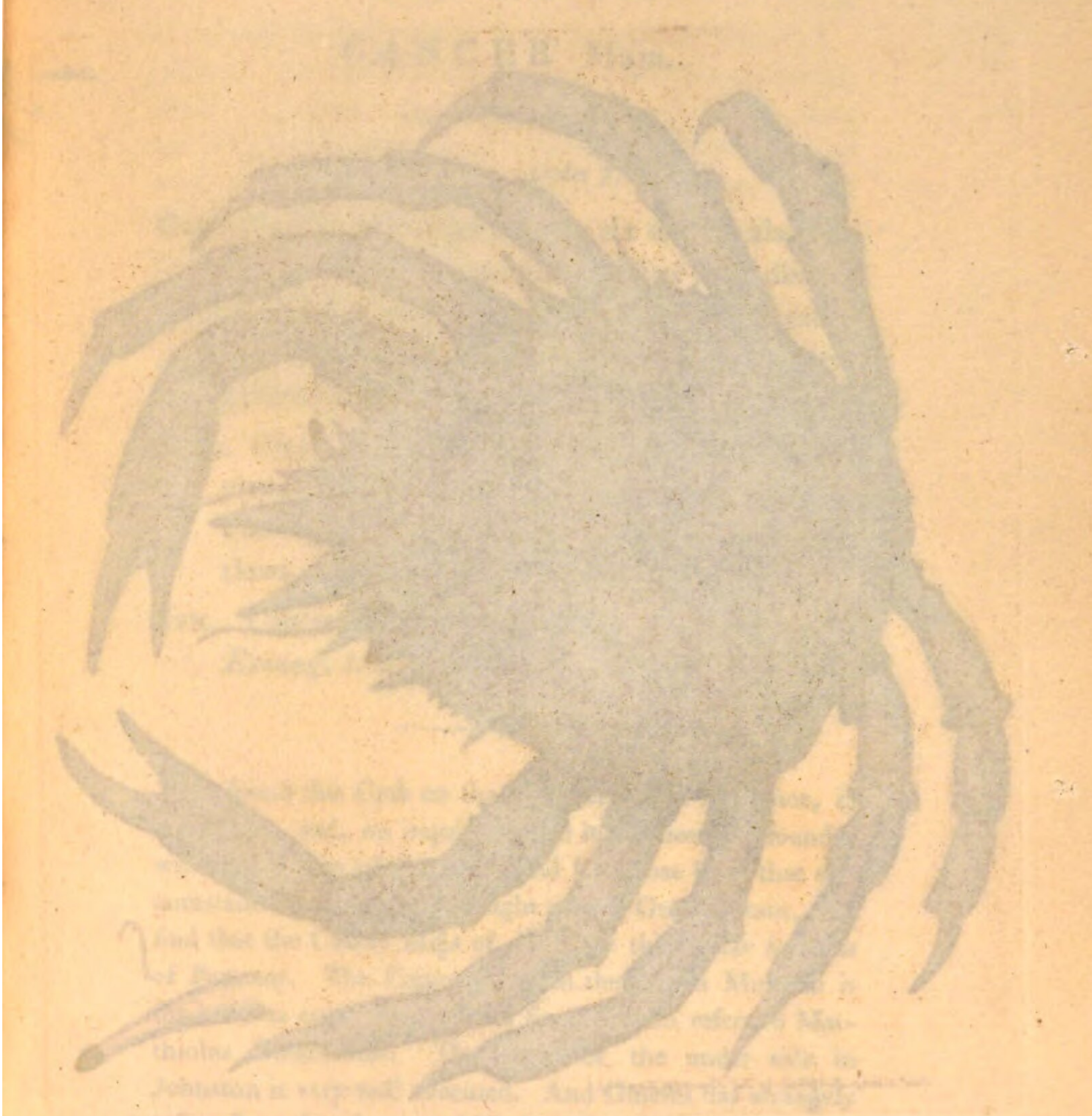
GEN. CHAR. *Proboscis* subcylindrical, extended. *Tongue* short, smooth, exerted. *Antennæ* of a middling length; of the females subclavate with 13 joints; of the males, filiform, of 14 joints. *Eyes* lateral, suboval, entire. *Wings* plane. *Sting* pungent, hidden.—*Kirby*.

SPEC. CHAR. Black, with fulvous pubescence. Head and anus black. Abdomen subhirsute, nigro-æneous.

SYN. Melitta nigro-ænea. *Kirby's Monographia Apum Angliæ, v.* 2. 109.

BODY black, covered with dense fulvous down. Face black-hirsute, beard of the Genæ fulvous. Vertex bald. Space between the eyes broad. Thorax with red down. Squamulæ pitch-coloured. Wings subhyaline, nerves testaceous. Costal nerve black. Anastomosis ferruginous. Feet black, above with fuscous down; beneath also the down is rather fulvous. Thighs with pale down. Hind thighs with a dense fulvous scopa. Scopulæ ferruginous. Abdomen oval, above nigro-æneous, hairy, with fulvous hairs. Anus black.

Generally found flying about sunny banks.



Oct.r 1.1805. Published by Jas. Sowerby, London.

TAB. XXXIX.

CANCER Maja.

Class 6. Insecta. *Order* 7. Aptera.

GEN. CHAR. *Feet* eight, rarely six or ten, also two claws. *Palpi* six, unequal. *Eyes* two, distant, generally pedunculated, elongated, moveable. *Jaws* corneous, thick. *Lip* triple. *Tail* jointed, generally unarmed.

SPEC. CHAR. Thorax and two first joints of the claws spinose. Claws small, finely serrated. Feet eight, without spines. Covered, all but the claws, with curved hairs.

SYN. Cancer Maja. *Gmel. Syst. v.* 1. 2979. *Jonst. Exsang. t. 5. f. 5.*

WE found this Crab on the sea-shore, near Penzance, in June 1799, and, on inquiry, found it had been confounded with *C. horridus* of Pennant, and I suppose from that circumstance had not been thought new to Great Britain. We find that the Cancer Maja of *Herbst* is the *Cancer horridus* of Pennant. The Cancer Maja in the British Museum is the same as ours, named from Scopoli, who refers to Matthiolus Dioscorides. The figure of the under side in Johnston is very well executed. And Gmelin has strangely referred to that figure, which has eight legs, although he observes of his, "pedibus sex."

The *Cancer horridus* of Linnæus is certainly different from the *C. horridus* of Pennant. It is well figured in Seba.

Lady Aylesford and Colonel Montague have found it on our coasts; indeed it is not very rare. Pennant's *C. horridus*, under the above circumstances requiring a new name, might be called *C. spinosissimus*. It is again remarkable that Gmelin has made a part of his Generic Character in these words, "cauda inermis;" whereas the thorax, legs and tail of this are covered with spines. We have some idea of figuring it; as there is not a coloured figure of it among British authors yet; and if we figure it, we may be able to clear up all doubts. We have it from Hartlepool by favour of our friend the Rev. James Dalton, and we know they have been found in Scotland. It has been doubted whether it is a British species.

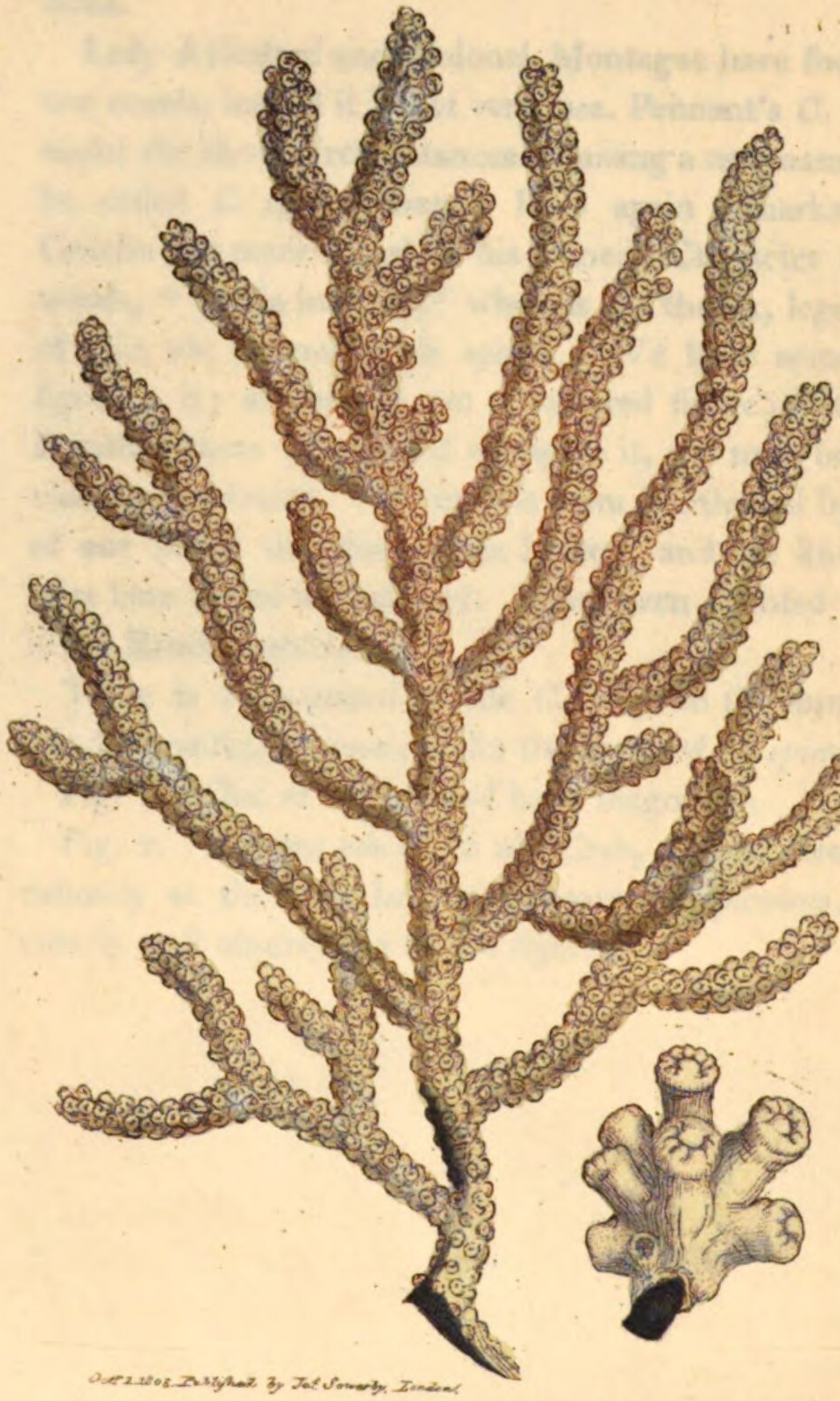
There is a specimen of our *C. Maja* in the museum of Mr. Heaviside, Surgeon; under the name of *C. spinosus*.

Fig. 1. One of the hooked hairs magnified.

Fig. 2. A worn toe of an old Crab, natural size.—The callosity at the end becoming more conspicuous, particularly well observed in Seba's figures.

TAB. XL.

GORGONIA *Verrucosa*.



Oct 1 1808 Published by Jas Sowerby London

TAB. XL.

GORGONIA viminalis?

Slender Gorgonia.

Class 6. Vermes. *Order* 4. Zoophyta.

GEN. CHAR. Animal growing in the form of a plant. Stem coriaceous, corky, woody, horny, or bony, composed of glassy fibres, or like stone, striated, tapering, dilated at the base, covered with a vascular or cellular flesh or bark, and becoming spongy and friable when dry. Mouths or florets covering the surface of the stem, and polype-bearing. *Turt.*

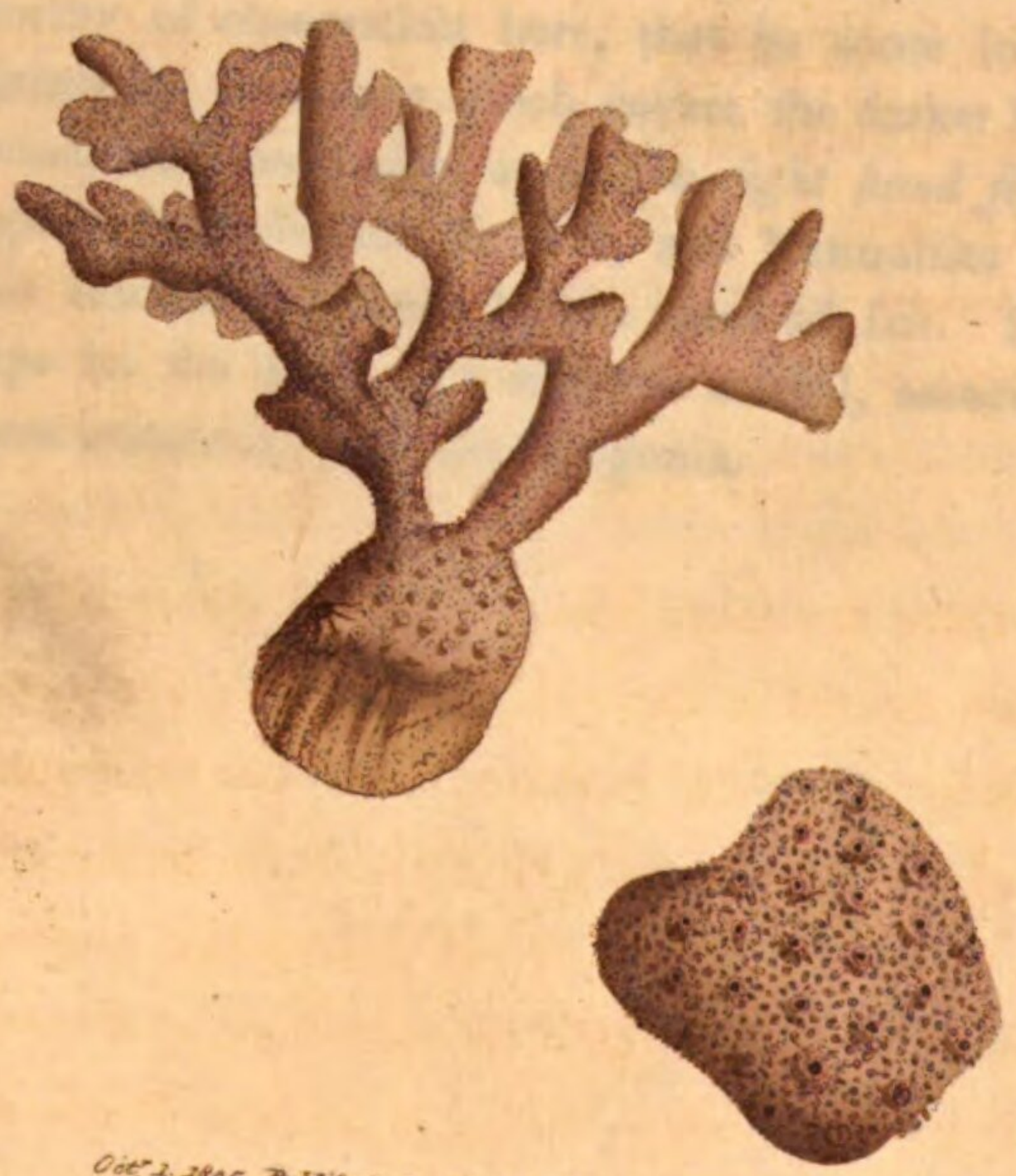
SPEC. CHAR. Slender, branched, florets seated all round the stem, each with a large valve and several smaller ones; bark yellow.

SYN. Gorgonia viminalis? *Soland. and Ellis, Coral. t.* 12. *f.* 1.

THIS is not rare on our coast, though it is but little known. The first specimen I received was by favour of Mr. Batten from Mount's Bay in Cornwall. I have also received it from Scotland, and Colonel Montague informs me that it is plentiful on the Devonshire coast.

It is somewhat remarkable, that that part which we should suppose to be the lodgment of the animal, commonly

called the florets, seems formed without sufficient room or opening for it to protrude: but we presume that, although a Coralline, it may have the power of opening the larger segment when fresh, which a coriaceous substance naturally admits of; so that the larger valve is a kind of door, and is a strong characteristic of the species, although it is sometimes much obliterated. We are not sure that this has been figured at all, as the segment which is so remarkable does not appear to have been noticed. It may be worthy of observation here, that in some instances the coriaceous substance which covers the darker branches all round, and protrudes, as at *the right hand figure*, often appears quite distinct from it, and Naturalists have called this blacker substance by the name of *Isis*. It may perhaps be the work of a separate animal, associated, as in these instances, with the Gorgonia.



Oct.r 1. 1805. Published by Jas. Sowerby, London.

TAB. XLI.

MILLEPORA compressa?

Class 6. Vermes. *Order* 4. Zoophyta.

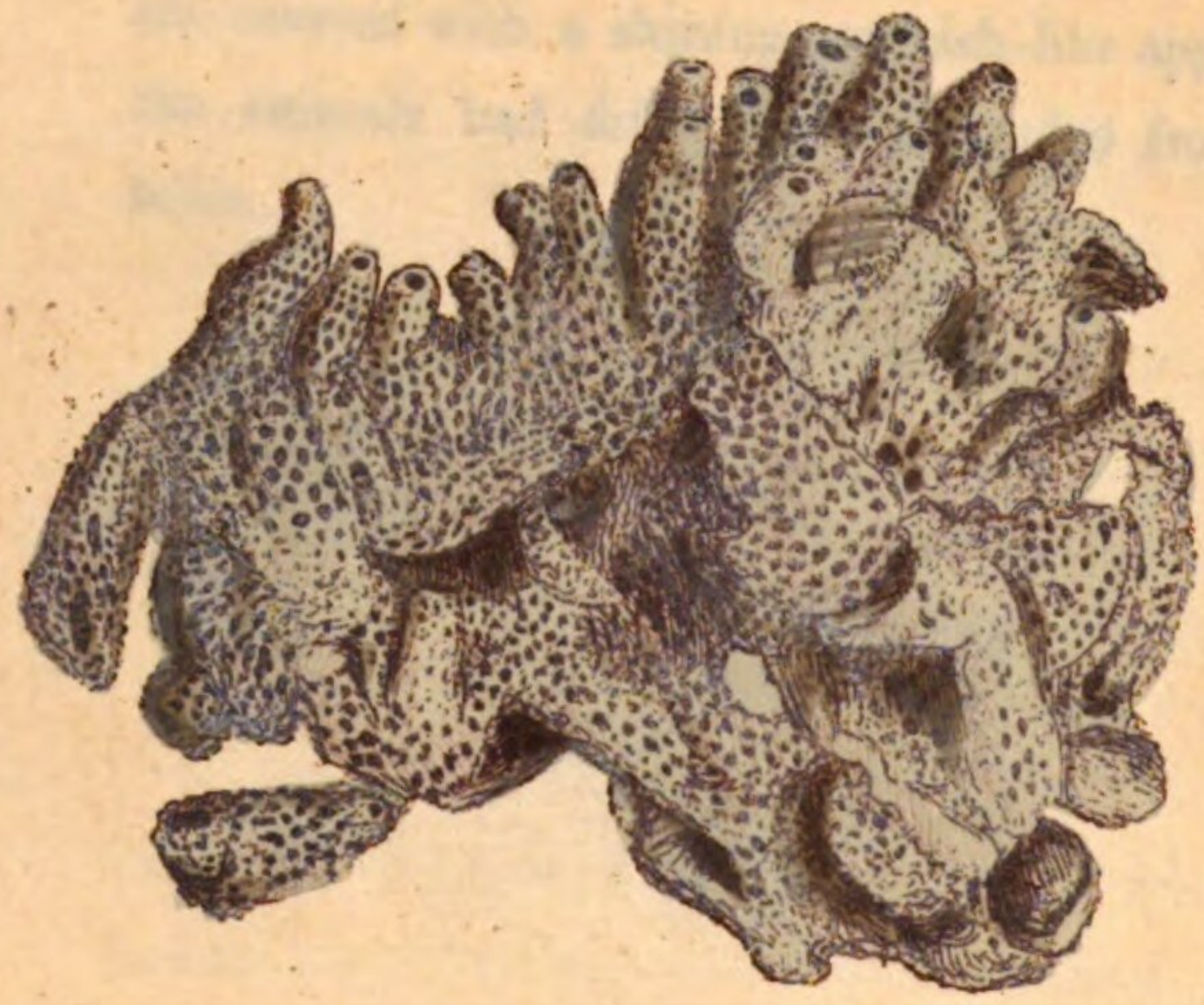
GEN. CHAR. Animal a Hydra. Coral, generally, ramose, with round turbinated pores.

SPEC. CHAR. Stem branched, compressed, truncated; pores everywhere a little prominent and rough.

SYN. Millepora compressa? *Gmel. v.* 1. 3785.

THOUGH there are some species of coralline, much resembling this, figured in Esper and other books, yet we can by no means identify them as this species. The description in Gmelin of *Millepora pumila* would seem to accord with it; but the figure in Marsden, to which he refers, is a very different thing. It may therefore be considered as a species undescribed, and now first published as British. We do not understand that it is uncommon on the Scottish coast, especially at Aberdeen. Specimens have been sent us from North Wales by favour of the Rev. H. Davies, with some other curious corallines which have not been before noticed as British. We hope however to see them from other places, that we may have more habitats for them. Perhaps many of this curious tribe may have been overlooked.

The present one is branched, divaricated, compressed, truncated, covered all over with small prominent hollow tubercles, arranged towards the end in lines crossing each other obliquely, from which the animals protrude themselves, so as to appear quite rough; and some specimens are covered with a shining, varnish-like appearance, as if the animals had dried when protruded from their little holes.



Oct.r 1 1805. Published by Jas Sowerby, London.

TAB. XLII.

SPONGIA compacta.

Compact Tubular Sponge.

Class 6. Vermes. *Order* 4. Zoophyta.

GEN. CHAR. *Animal* fixed, flexile, torpid, of various forms, composed either of reticulate fibres, or masses of small spines interwoven together, and clothed with a gelatinous flesh full of small mouths on its surface, by which it absorbs and rejects water.

SPEC. CHAR. Tubular, ramose, composed of spiculæ crossing one another, very compact and brittle.

WE suspect this has been much confounded with *Spongia tomentosa* (*urens* of Ellis): we however think it at first sight sufficiently different. It appears more like the habitation of an insect with more or less ovate tubular terminations. It is much tougher and more cottony in its texture, has sometimes a smoothish covering towards the mouth of the apertures, which occasionally passes into extreme fine reticulations, over the coarser reticulations on the surface.

We have found it in great plenty at Shellness, and other parts of Sheppey Island, at different seasons; and we

have been favoured with it from the Rev. Hugh Davies, of Anglesea. It is generally found attached to shells, and other marine productions, but apparently detached from rocks, as it is generally among the rejectamenta of the sea. Although we think it may have some curious inhabitant, we have not been so lucky as to detect any; nor do we know that the inhabitants of Sponges have been detected, unless the egg-like substances found in *Spongia fluviatilis* may be such. We hope, however, that those who have opportunity will examine into this subject, as it remains in great doubt. Many foreign Sponges are tubular, and probably ought to be examined on the rocks on which they are formed, to detect the animal.

TAB. XLIII.

SPONGIA pelechella.

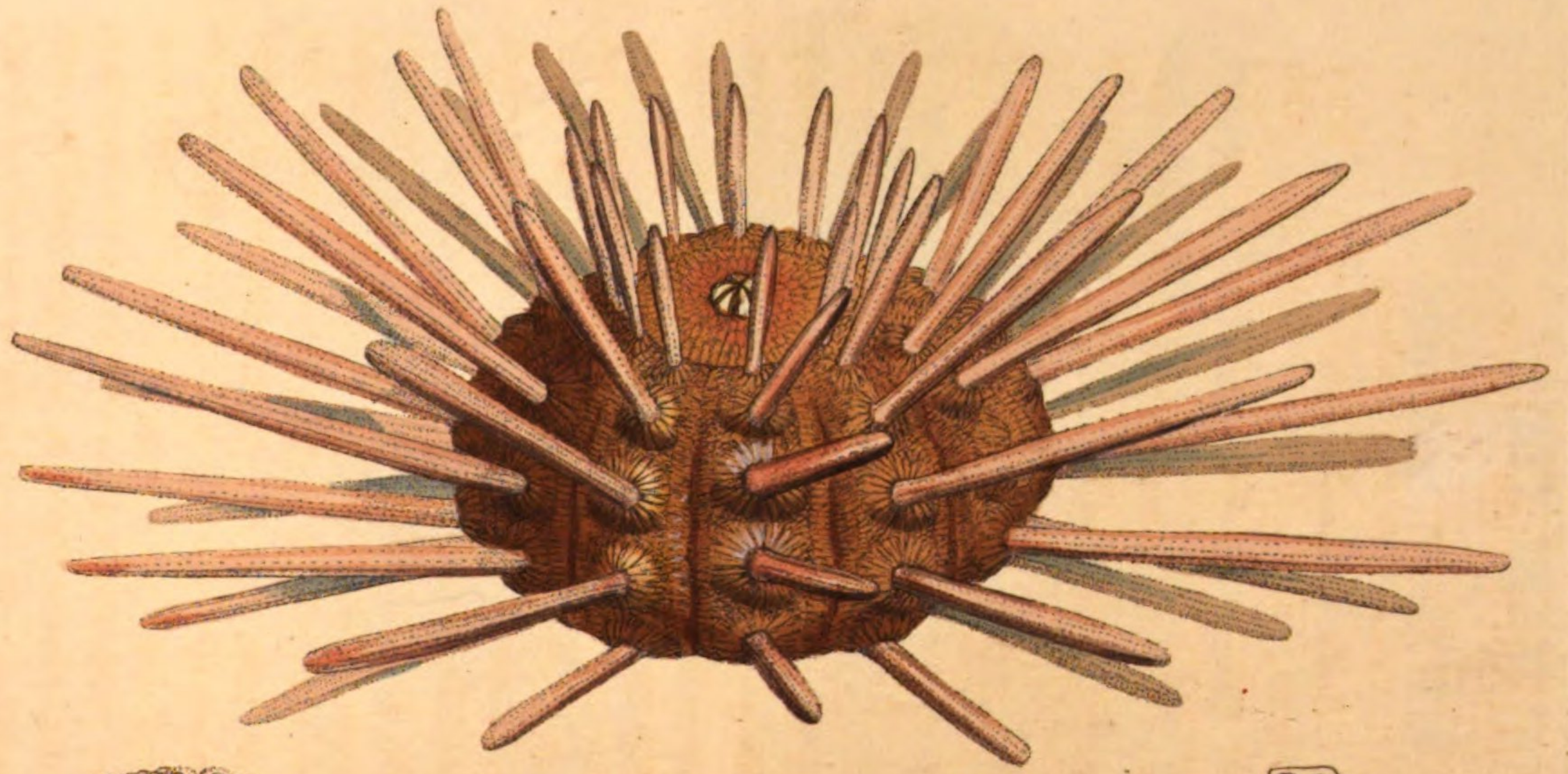
43
Oct.r 1 1803 Published by Jas. Sowerby, London.

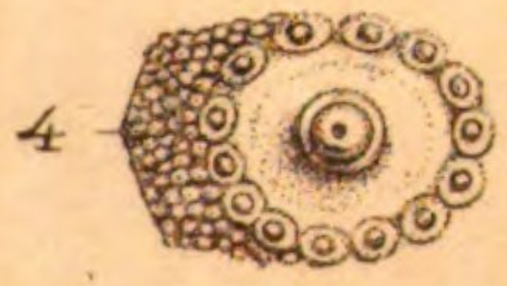
TAB. XLIII.

SPONGIA pulchella.

SPEC. CHAR. Composed of fine reticulations, smooth and soft in appearance, generally compressed and broad.

I FIRST received this sponge from Ireland, brought from thence by Mr. Browne (who was engaged in the voyage of discovery to New South Wales) about the year 1800; and in 1802 I received it from North Wales by favour of the Rev. Hugh Davies. It is extremely irregular as to shape, although sometimes approaching to a fan shape, and sometimes rather palmate or digitate. Its fibres are delicately reticulate. It varies in colour, somewhat like the *Spongia officinalis* or common Sponge, from a palish brown to a yellowish or reddish brown. It is however readily discerned by its less coarse appearance. Its texture may be somewhat more rigid.





1
2

Oct. 1. 1805. Published by Jas. Sowerby, London.

TAB. XLIV.

ECHINUS cidaris? *var.* α.

Class 6. Vermes. *Order* 2. Mollusca.

GEN. CHAR. Body roundish, covered with a bony sutured crust, and generally furnished with moveable spines. Mouth placed beneath, and mostly five-valved.—*Turt.*

SPEC. CHAR. Hemisphærical, depressed, with five flexuous linear avenues, the spaces alternately bifarious.—*Turt.*

SYN. Echinus cidaris, var. α? *Gmel. v.* 1. *p.* 3174.
Cidaris papillata major. *Klein ap. Leske Echinod. t.* 39. *f.* 2. *t.* 51. *f. h.* 1. *h.* 2.

THE ECHINI are pretty well known, from their having spines resembling those of a hedgehog, and they have been called in common *Sea Hedgehogs*, Sea Urchins; and when destitute of the spines they are sometimes called Sea Eggs, &c. Mr. Pennant took some pains to select the English species for the information of his countrymen.

He, however, does not appear to have known the present species, although he travelled in Scotland. Our friend Alexander M'Leay, Esq. who, laudably, forgoes no researches, that his opportunities permit, to investigate the natural history of the British Isles, obligingly communicated this Echinus, totally new, not only to Great Britain, but differing also from any yet found elsewhere; although, from its general resemblance to that elegant species brought from New Holland (with which I have been able to compare it, by favour of Governor Paterson, who presented me with a fine specimen from thence, with the spines quite perfect), it might be confounded with it. It also differs from those

found in a fossil state, which much resemble that from New Holland; and much discernment is requisite to distinguish it from them, and which will be represented at tab. 151. British Mineralogy, being the cast of a species which existed probably in ante-diluvian times. Their construction is always singularly uniform and beautiful: the present is perhaps as much so as any: we therefore wonder that it has escaped the attention of the curious, for we know of no other specimen yet brought to London.

It is a sort of compressed globe, and, as in others, is divided into five principal partitions, each of which has four rows of perforations, which we believe to be foramina. These are covered in an elegant manner with minute elongated spines, in two rows, with two rows of smaller ones at their bases, forming a serpentine line in the centre. These smaller ones are somewhat elongated, and in that respect differ from the New Holland one. Thus there are five grand divisions, which are also subdivided in the centre by a serpentine line, differing from the former in having six rows of small acute spines, without any perforations under them: on each side of these, in the longitudinal direction of the shell, are six or seven ovate divisions regularly set round with flat elongated spines fixed on the circumference, and inclining towards the centre, somewhat conically, surrounding solid spines, from half an inch to three inches or more in length. These spines vary a little in proportion of thickness; the lower ones are generally thickest, most equal, and bluntest; some diminish towards the ends, others thicken a little, those near the mouth are sometimes partly spatulate. They are all covered with ridges of small tubercles, most prominent towards their points, with a spongy appearance surrounding them. The mouth is covered with imbricated blunter spines.

It may be observed that, in describing these, we much resemble conchologists, who rather describe the case or

house of the animal than the animal itself: here, however, we have been describing the bone and its appendages, which are the covering of this animal. Linnæus described it as a bony covering; and analysis, by that accurate chemist Mr. Hatchett, has shown that Linnæus was perfectly right, seeing that shells are entirely destitute of phosphoric acid, and bones have always a portion of it. The bones of the mouth of this animal are a curious congeries within this* case; the rest of the animal we know very little about, and the little there is of it is eaten in some places in Scotland and other parts.

This Echinus was found by some fishermen in the islands of Shetland, where it is known by the name of the Piper, from the spines being supposed to resemble the drones of a bagpipe. The fishermen there say that specimens are sometimes found with spines nearly a foot in length; but some allowance must be made for exaggeration in all statements of this nature. The figure is nearly the size and proportion of the specimen.

Since writing the above I have seen a small specimen in the possession of Mr. Lee, of Hammersmith, about an inch and a quarter in diameter, of which the spines are some twice that length, but imperfect, and some deeper furrowed. Some parts being nearly destitute of spines, we find the bone so nearly resembling our species, that we consider them the same, as we could not see any specific difference. The spines seem to be longer in proportion in this small specimen than in the larger one. From their internal structure we should consider them as adapted for growth, and in this they somewhat resemble the structure of the stems of some plants, having a kind of central pith, and radiating in divaricating circles from it. We

* The five teeth are generally elongated inwards, and are composed of fine silky filaments resembling asbestus, but are brittle.

therefore venture to conjecture that they do not cast their spines nor case, as lobsters do.

These things are extremely difficult to make out; and if we should make any mistake, it may be so far successful as to be the cause of finding out the truth.

There is the same species recent at the British Museum; and one of them has the spines over the foraminous apertures turned back: perhaps, they are commonly so when alive. We do not know from whence they come.

On looking over Klein, we found a figure which appeared to be the same as ours, and which Gmelin quotes as var. *α*. of his *Echinus cidaris*. We also find a specimen in Mr. Woodd's most respectable collection, which seems to have been taken in a living state. On examining all the specimens with a great deal of attention, we find the foramina constantly different from the New Holland one; we therefore suspect that it is another species, and ought to have a new name. The double foramina are situated in simpler-formed bones, which are thickest at one of the ridges; when the animal's mouth is downwards, they seem to lap over each other like tiles. The New Holland one has strong indentations between the double foramina, and the bone forms a kind of beak-like process, curving into the holes—see figs. 1. 2. As these animals are often admired when destitute of spines, it may be necessary to observe another difference in the bones. The five divisions destitute of foramina have, as we before observed, six rows of spines; consequently they have six rows of tubercles, suited for the sockets of the spines, somewhat distant. Those from New Holland are more equal in size, more crowded and numerous: see figs. 3. 4.

We do not think that the figure of a petrified specimen referred to by Gmelin, in Klein, is the same species. We have specimens sufficiently preserved to see the difference, which will be figured in *tab.* 152 of *British Mineralogy*.

Dec.1 1806. Published by Jas Sowerby, London.

TAB. XLV.

STYLOPS Melittæ.

Class 5. Insecta. *Order* 2. Hemiptera.

GEN. CHAR. *Antennæ* bipartite. *Eyes* sitting on a foot-stalk. *Elytra* fixed to the sides of the thorax. *Scutellum* extended, covering the abdomen.

SPEC. CHAR. Very black. Wings larger than the body.

SYN. *Kirby Monogr. Apum Angl. v.* 1. *t.* 14. *n.* 11. *f.* 1—9. *v.* 2. 110—14.

Length of the body, $1\frac{1}{2}$ line.

BODY very black, not shining. The head before obsoletely three-lobed. Feelers four, the exterior consisting of two joints, the first subclavate, the second lanceolate, acute; the interior shorter, not jointed, slender, towards the end a little thicker. Antennæ longer than the head, with the first joint large, short, sending out two branches; the interior shorter, wider, without joints; the exterior longer, more slender, consisting of three joints. Eyes large, prominent, conspicuously reticulated, sitting on a short thick peduncle. Vertex flattish. Elytra small, sublinear, fixed to the sides of the thorax. Wings two, large, longer than the body, folding, milky white, with a blackish rib and submarginal line. Scutellum extended, elongate, slipper-shaped, covering the abdomen, strengthened on each side by a corneous process. Legs compressed, piceous. Abdomen hid under the scutellum, fleshy, with a truncate subemarginate anus.

The body of the larva is subcylindrical, soft, whitish, inserted into the abdomen of the Melitta, the head being

exserted, corneous, heart-shaped, flattish, subrufous, black behind, underneath concave behind. *Mon. Ap. Angl.*

Since I met with the extraordinary insect here described, I have had the good fortune to extract a pair of pupæ just ready to be disclosed, from the body of another *Melitta*. No sooner did I touch them, than they "burst their cerements," and I was not slow to prevent their escape. One of these is here figured. It seems to vary somewhat from my original specimen, but not sufficiently, I think, to be deemed a distinct species. The legs are black instead of piceous, the abdomen also is not so totally concealed by the scutellum, but is rather exserted and acute. This part, however, is most probably retractile, for being fleshy, and consequently liable to injury, it wants the shelter which the scutellum above and the processes on the sides and beneath *(fig. 7. bb.)* seem designed to afford it. The velvetty blackness of the body makes the sutures of the trunk and the inosculations of the first joints of the antennæ very difficult to distinguish even under a powerful magnifier. In my original specimen I discovered only a single joint before the antennæ branched out. Mr. Sowerby found two, as represented in *fig. 5.* The shape of the lower branch or auricle seems different also in the two specimens.

"Mr. Sowerby suggested to me that what I took for larvæ of this insect (*Monogr. Ap. Angl.* 111—14) were really pupæ:—To this ingenious conjecture I readily accede, as it removes all the difficulty with respect to their mode of feeding; the larva living entirely within the body till it is ready to take the pupa, and then exerting its head at the dorsal inosculations of the abdominal segments, that the perfect animal may the more readily disengage itself when its time for disclosure is come. The pupæ are generally found in pairs, (*fig.* 1, 2), these may probably be the sexes."

This genus appears not be confined to *Melitta,* for I have more than once found their exuviæ in the body of foreign Vespæ.

Where the entomologist may have a chance of meeting with these curious insects in their imago state (except, like myself, he seizes the fortunate moment when they are just ready to leave the body of the animal that supports them) is a question which I wish it were in my power to answer satisfactorily. We must first ask, In what state of the *Melitta* does it commit its eggs to it? If in the larva the habitation of this is usually at some depth under ground; and perhaps by digging where we observe them flying about a bank, and entering their burrows, we might possibly meet with some. If in the imago (but it seems not easy to conceive that the *Stylops* with its soft abdomen, furnished with no strong aculeus or oviduct, can perforate the scaly mail of the *Melitta* to deposit its eggs, without indeed it insinuates them at the inosculations of the abdominal segments)—in this case most probably it goes to work when the *Melitta* reposes, and may be a night-flyer; but it would not be very easy to see so minute a creature in the night. Perhaps a butterfly-net might be used with success about banks where we observe many burrows of insects.

Obs. The Pupæ Mr. Sowerby has figured appear to be ovate, where as mine were linear. See *fig.* 2, and *Monogr. Ap. Angl. v.* 1. *t.* 14. *n.* 11. *f.* 7.

Explanation of the Plate.

Fig. 1. Male of *Melitta albicans* with a pair of the Pupæ of *Stylops Melittæ* in its Abdomen.
2. Abdomen of ditto magnified.
3. *Stylops Melittæ* natural size.
4. Ditto magnified. *a a* Eyes. *b* Scutellum.
5. Head of ditto as seen under a powerful magnifier. *a a* lower branch of the Antennæ. *b b* upper ditto. *c c* exterior Feeler. *d d* interior ditto.
6. Part of the Trunk. *a* Thorax. *b b* Elytra.
7. Underside of the Abdomen and Processes. *a* Abdomen. *b b* Processes.

W. Kirby.

Dec.r 1. 1806. Published by Jas. Sowerby, London.

TAB. XLVI.

LIBELLULA conspurcata.

Stained Dragon-fly.

Class 5. Insecta. *Order* 4. Neuroptera.

GEN. CHAR. *Mouth* furnished with two pair of jaws. *Antennæ* very short, bristle-shaped. *Wings* plane, extended. *Front* vesicular. *Anus* of the male armed with forceps.

SPEC. CHAR. Wings with a marginal yellow stripe, and a brown spot at their tips.—*Fabr.*

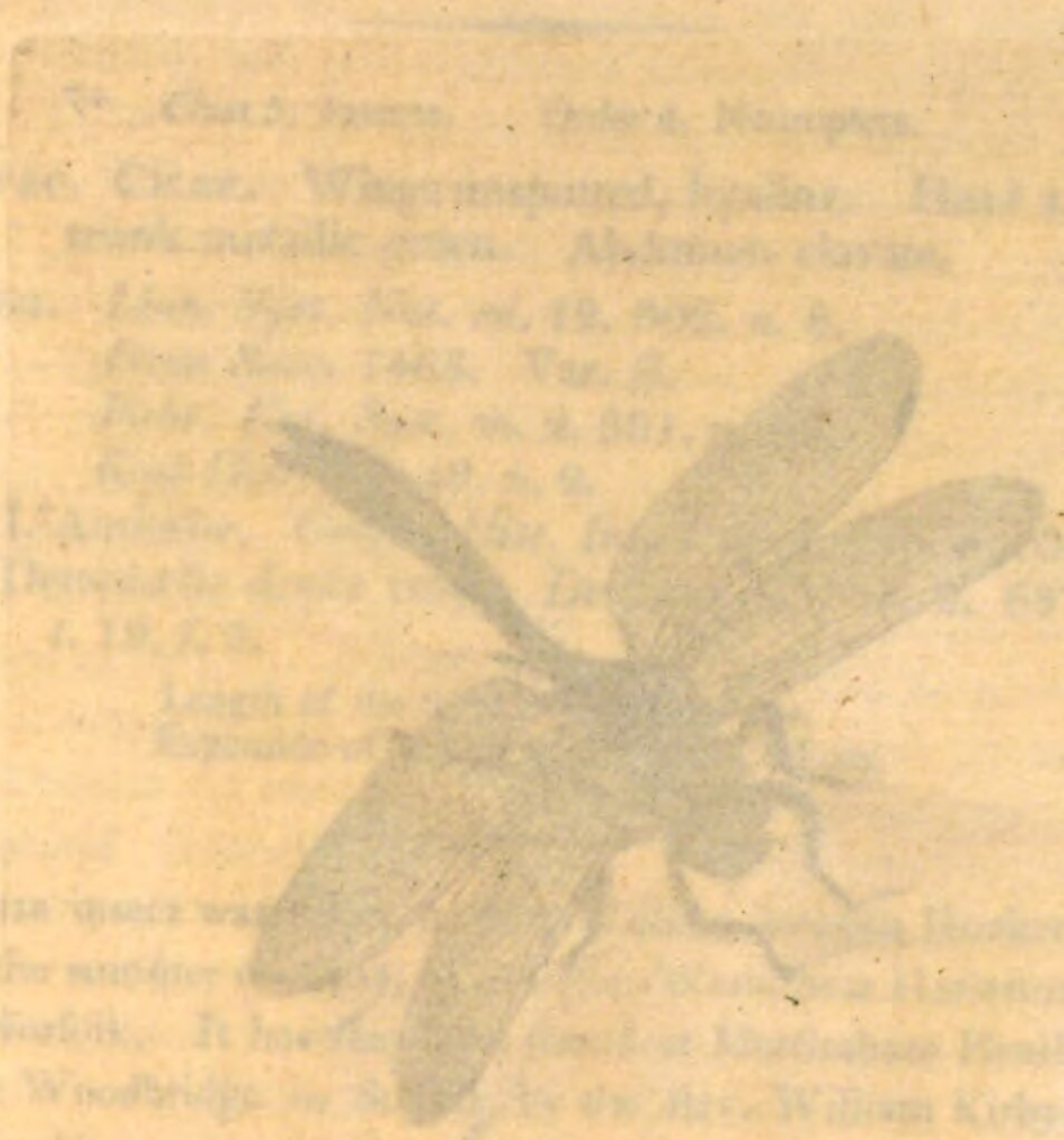
SYN. Libellula conspurcata. *Fabr. Suppl.* 283. *n.* 1—2.

Length of the body, 1 inch, 6 lines.
Expansion of the wings, 2 inches, 10 lines.

THE insect here figured resembles not a little *L. 4-macu-lata;* but is nevertheless quite distinct from it. The head is of a dirty yellow. Trunk downy, of the same colour, with black sutures. Abdomen prismatical, dirty yellow, with the lateral and dorsal angles black. The wings, a little within the anterior margin, are stained with a longitudinal yellow stripe, which does not quite reach the tips. The anastomosis is black, with a brown cloud terminating the wing. The secondary wings have besides a black spot at their base.

We are indebted to Mr. Joseph Hooker of Norwich for this insect, who took it in the summer of 1804 in a wood at Sprowston near that city.

Bayerische
Staatsbibliothek
München



Decr 1 1805. Published by Jas Sowerby, London.

TAB. XLVII.

LIBELLULA ænea; *Var.*

Metallic Dragon-fly.

Class 5. Insecta. *Order* 4. Neuroptera.

SPEC. CHAR. Wings unspotted, hyaline. Head and trunk metallic green. Abdomen clavate.

SYN. *Linn. Syst. Nat. ed.* 12. 902. *n.* 8.
Faun Suec. 1465. Var. *β.*
Fabr. Ent. Syst. m. 2. 381. *n.* 35.
Raii Hist. Ins. 49. *n.* 2.
L'Aminthe. *Geoffr. Hist. Ins. Par.* 2. 226. *n.* 10.
Demoiselle dorée verte. *De Geer.* 2. *par.* 2. 687. *t.* 19. *f.* 8.

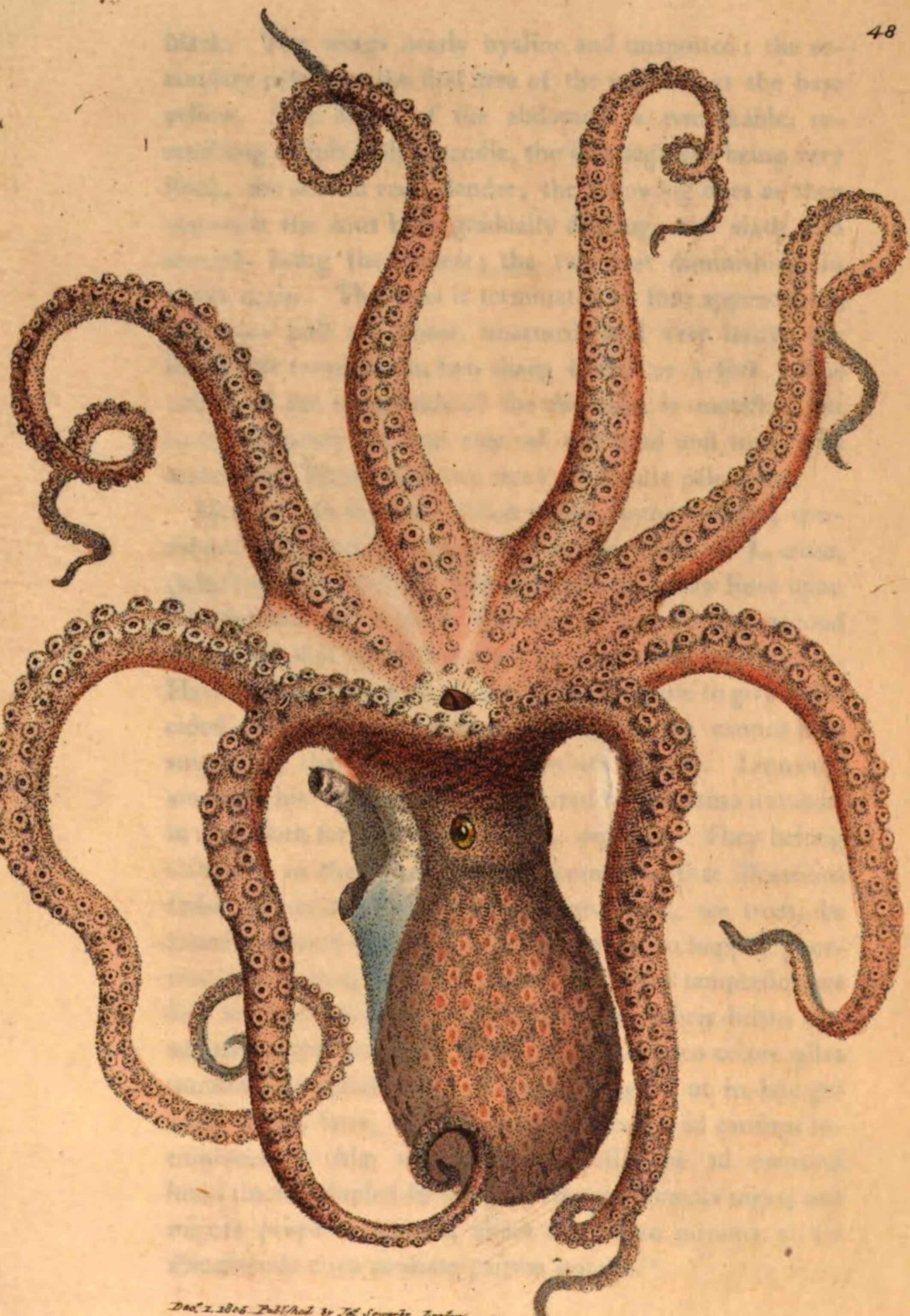
Length of the body, 1 inch, 10 lines.
Expansion of the wings, 2 inches, 8 lines.

THIS insect was taken by Mr. William Jackson Hooker, in the summer of 1803, at Starston-Wood near Harleston in Norfolk. It has also been found at Martlesham Heath near Woodbridge in Suffolk by the Rev. William Kirby. Both the specimens taken by these gentlemen are males; the female we have not yet had an opportunity of inspecting. Linnæus mentions no difference between it and the male, except that its anus wants the forceps, being furnished with only two lanceolate appendages.

The body of our specimens, the head and trunk especially, is covered with yellowish down. The mouth is yellow. The vesicular part of the front before the eyes and the thorax are of a brilliant metallic green. The sides of the trunk glitter with the hue of gold or copper. The legs are

black. The wings nearly hyaline and unspotted: the secondary pair have the first area of the network at the base yellow. The shape of the abdomen is remarkable, resembling a club with a handle, the first segment being very thick, the second very slender; the following ones as they approach the anus keep gradually dilating; the sixth and seventh being the widest; the two last diminishing in width again. The anus is terminated by four appendages; the upper pair are linear, unarmed, and very hairy; the lower pair terminate in two sharp teeth, or a fork. The colour of the upper side of the abdomen is metallic, but more obscurely so than that of the head and trunk; its underside is black, with two rows of obscure pale spots.

Linnæus, in the first edition of his Fauna Suecica, considered the insect here figured as distinct from his *L. ænea*, (which appears to differ from it in having yellow lines upon the thorax, and a black abdomen); but in the second edition of that admirable work he gave them as varieties. Having never met with α, we cannot venture to give a decided opinion as to its identity with β, yet we cannot help suspecting that they may be distinct species. Linnæus, amongst his synonyms, has referred to the same numbers in Ray both for this insect and *L. depressa*. They belong evidently to the latter. Our reference to that illustrious father of natural history in England will, we trust, be found perfectly correct. His description so happily pourtrays our insect, that we cannot resist the temptation we feel to insert it here. "Thorax pilis crebris hirtus est, supinè e viridi et cupreo mixto, subtus cupreo colore pilos translucente splendens. Abdomen longum ut in hoc genere, tenue, læve, ad exortum a thorace et ad caudam intumescens. Alæ membranaceæ pellucidæ ad exortum luteo tinctæ, duplici in margine exteriore lineola nigra, una majore prope extremum, altera transversa minima et vix discernenda circa mediam partem notatæ."



Dec.r 1. 1806 Published by J.C. Sowerby, London.

TAB. XLVIII.

SEPIA octopus.

Eight-armed Cuttle-fish.

Class 6. Vermes. *Order* 2. Mollusca.

GEN. CHAR. *Body* fleshy, receiving the breast in a sheath, with a tubular aperture at its base. *Arms* eight, beset with numerous suckers, and in most species two pedunculated tentacula. *Head* short. *Eyes* large. *Mouth* resembling a Parrot's beak. *Turt.*

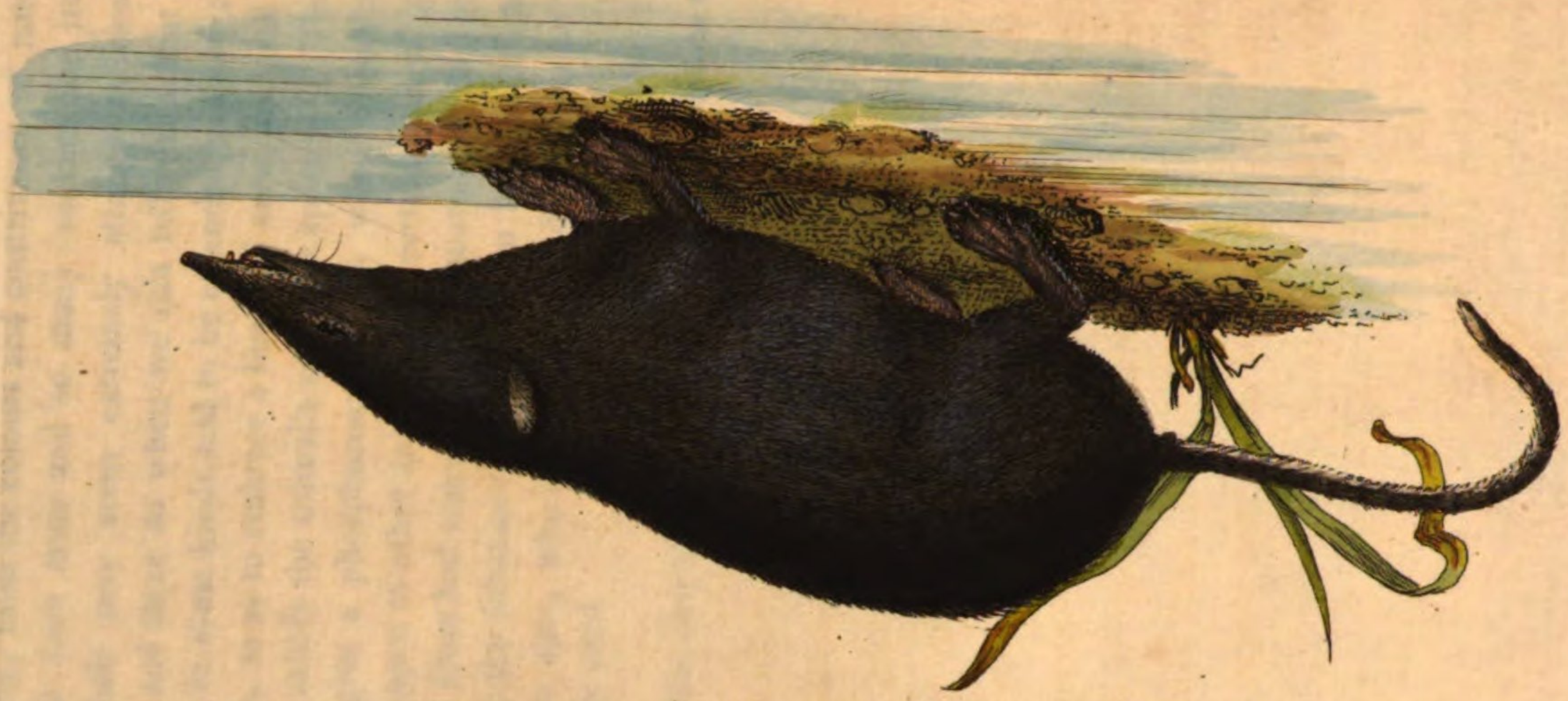
SPEC. CHAR. Body without tail or appendage. Pedunculated tentacula, or longer arms, none. Arms beset with a double row of tentacula.

SYN. *Seba Mus. v. 3. t. 2. f.* 1, 2, 3. 5.

THIS Cuttle-fish, commonly so called, was sent me from Dover by my friend Mr. Richard Phillips. I received it alive. Whether it is a variety of the *Sepia octopodia* of Pennant, I cannot positively determine. It is certainly sufficiently distinct from one which I had from my friend G. Montague, Esq., which agrees with Pennant's, having a single row of suckers upon each arm; for, besides the double row of suckers which ours has, it is much more coloured, and different in shape, the body being longer. There is no mention made of *Sepia octopodia* with double rows of suckers by Pennant. Gmelin and Turton only speak of such. There are figures of both in Seba.

This, for the strangeness of the animal, is both curious and pretty, from the colours and contrivance of nature in giving it such arms and so many suckers for its size. The whole may seem extremely strange to new observers, and more so when we can tell them that these arms are in some kinds said to be extended to above 50 feet in length, so as to embrace a boat and crew, and pull them down to satisfy the animal's voracious appetite*. They are said to give a phosphorescent light when opened: this might happen to other animals in a certain state of putrefaction. Ours had some black inky matter in the pouch, said to be the substance used for Indian Ink. It differs very little from soot, which there is little doubt may be more commonly used.

* The Indians carry hatchets to cut off these arms, and relieve the boats.



Duck-bill Platypus. by Jac Swaney. London.

TAB. XLIX.

SOREX ciliatus.

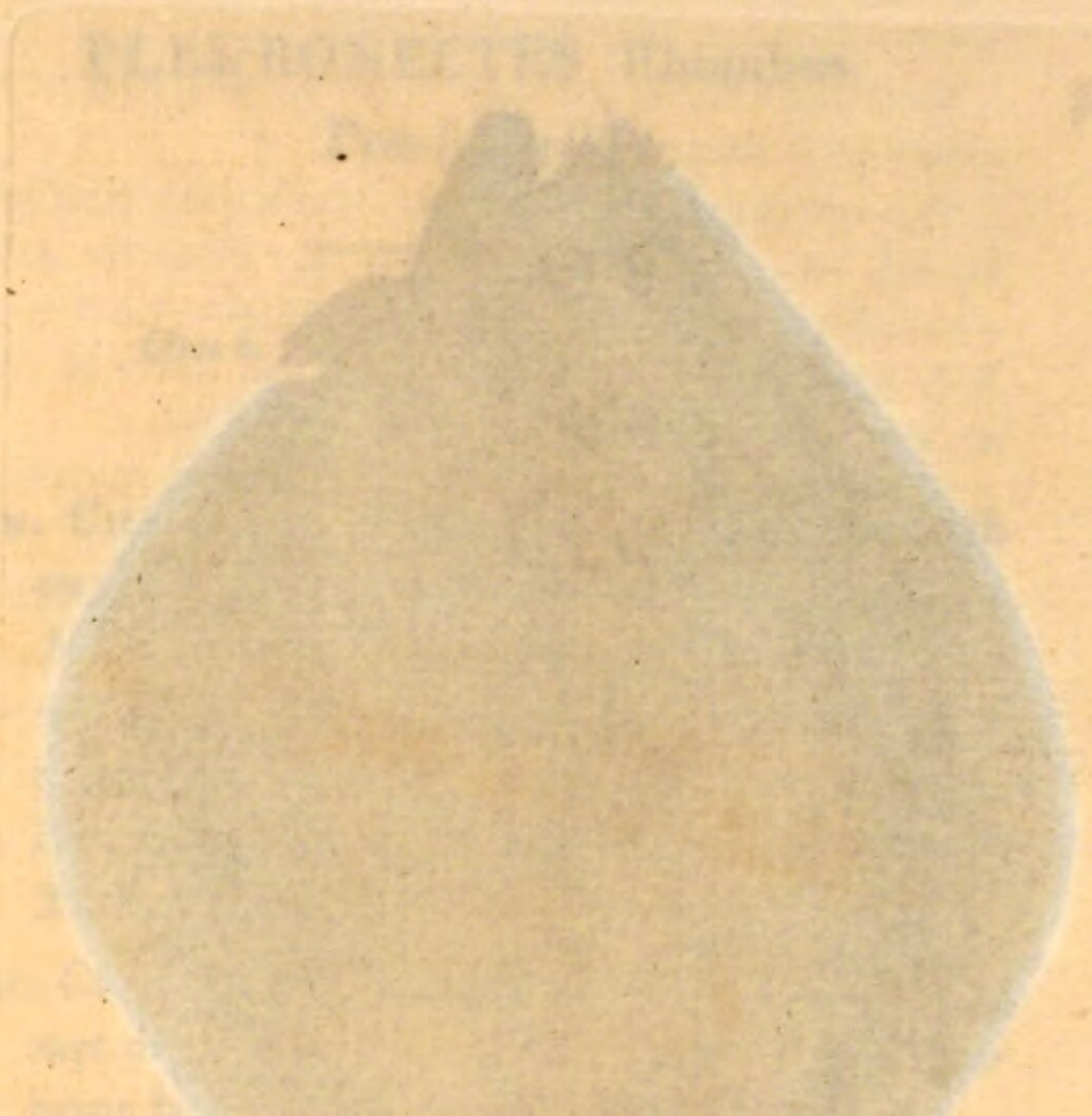
Fringe-tailed Water Shrew-mouse.

Class 1. Mammalia. *Order* 3. Feræ.

GEN. CHAR.

SPEC. CHAR. Black. Toes and tail with a white fringe underneath.

THIS, probably, new species of Sorex was caught in a ditch in Norfolk by W. J. Hooker, Esq. It is larger than the Land Shrew, and different in shape and colour. It is about the size of the Water Shrew, but is neither so black on the back, nor so white on the belly, being very nearly of a similar tint all over; a grayish black, scarcely at all lighter underneath. It is remarkable for a fringe of shortish white hairs on the under side of the tail, which is blackish with a white tip. The legs and toes are also fringed underneath with white hairs.



Pub.d 1826. Published by Jas Sowerby London

60

TAB. L.

PLEURONECTES Rhombus.

Pearl, Brill.

Class 4. Pisces. *Order* 3. Thoracici.

Div. Eyes on the left side.

GEN. CHAR. *Head* small. *Eyes* spherical, both on the same side the head, and near each other. *Mouth* arched: jaws unequal, toothed. *Gill-membrane* with 4—7 rays; the cover mostly of three laminæ. *Body* convex and coloured above, flat and paler beneath. *Vent* near the head.—*Turt.*

SPEC. CHAR. Body smooth, rhomboidal; four first rays of the dorsal fin ramified, with the membrane lacerated between each branch.

SYN. *Gmel. v.* 1. 1235.

THE London fishermen often call this the Turbot, and to those unacquainted with that fish this is sometimes sold as such. It is known by the name of the Brill in common. It seems, however, to be the Pearl of most authors. It is much less esteemed by the epicure than the Turbot, as it differs in its flavour as well as in its specific characters. It has no spines or conical rough bones in the skin like

that fish, which is rounder and brighter. The Brill is truly rhomboidal, grayish brown with minute and large brown spots; the dorsal fin is curiously lacerated just above the head *; the underside has a delicate pearly whiteness, whence I suppose its name is derived.

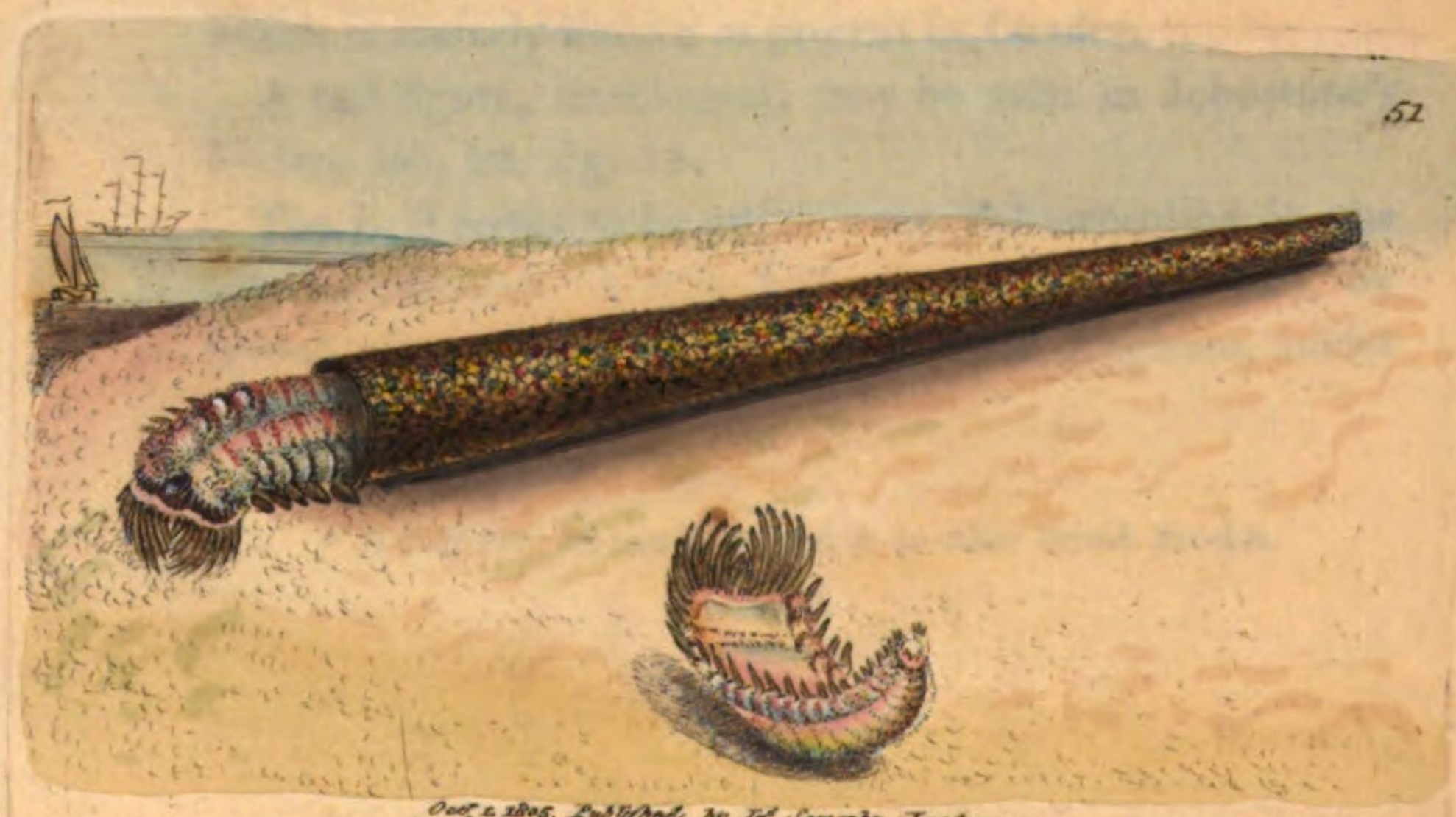
As it is inferior in goodness to the Turbot, so it is commonly sold cheaper.

It is somewhat remarkable that this has not been before figured, although so much spoken of. From the general conversation I have had about it, it appears that the term Brill has confounded and obscured the name of Pearl, which is scarcely known at present in London.

A bad figure, uncoloured, may be seen in Johnstone's Fishes, tab. 22. fig. 13.

The Brill seems to be rather a rare fish excepting in the London markets. I have had some very small ones, by favour of the Rev. Hugh Davies, from Anglesea, under the name of the Pearl.

* A character we have observed in no other British flat-fish.



Oct.r 1. 1805. Published by Jas. Sowerby, London.

TAB. LI.

NEREIS pectinata.

Class 6. Vermes. *Order* 4. Mollusca.

SPEC. CHAR. Smooth, prismatically coloured. Tentacula 14 on each side, gold-coloured. Legs 14 on each side, also gold-coloured.

THIS strikingly beautiful and curious animal excited the attention of the ingenious Dr. Boys, who was so kind as to present me with specimens of it a long time since. The tentacula and the peduncles being of a finely golden appearance, recall that grand description in the Revelations, " his feet were like unto fine brass, as if they were burned in a furnace." Whether the inspired writers alluded to natural history in their descriptions we do not know; they are however very sublime in some of their comparisons. The tentacula appear somewhat solid, but the feet seem to be composed of bundles of golden hairs. There are numbers of little brown papillæ upon what appears to be the lip. There are prominent, almost laminated sorts of thighs to the feet or bundles of hairs. We could not find the organs by which life is sustained such as the mouth, &c. The marine animals require much attention to discern their functions and manner of living; but we expect to improve in this kind of knowledge, as the present age is laudably inquisitive into such subjects, which can hardly

fail to be of future use. The case has been indifferently figured by Pennant. It is remarkable for its uniformity, being perfectly straight, but somewhat conically tubular. It is composed of bits of shells and chosen particles of sand, so arranged as to form an equal surface; the gluten cementing them together entirely covering the inside, and appearing externally between the particles when examined by a magnifying glass only. There is little doubt but these animals quit their cases, as we have seen fresh water animals with tubular cases do, and dexterously recover them again. The case of this animal, which is called *Sabella tubiformis*, has with the rest of that genus been placed with the *Vermes Testacea*; we do not find fault with this arrangement, as, perhaps, without the animal, there may be no better place for them.

They are found on the Sandwich and other shores, but the cases are oftener found without the animal than with it. We have not had the pleasure of seeing this animal in its natural situation; and have therefore placed it as if fallen on the shore, with the animal nearly out of the covering; the other animal has fallen carelessly on its back:—thus a view is given both of the back and front. The case is said to be found immersed perpendicularly in the sand, with the broad end and head upwards.

Dec.r 1. 1806. Published by Jas. Sowerby, London.

TAB. LII.

ICHNEUMON persuasorius.

Class 5. Insecta. *Order* 5. Hymenoptera.

SPEC. CHAR. Scutellum with two white spots. Thorax spotted. Abdomen black, with the segments marked on each side with two white spots.

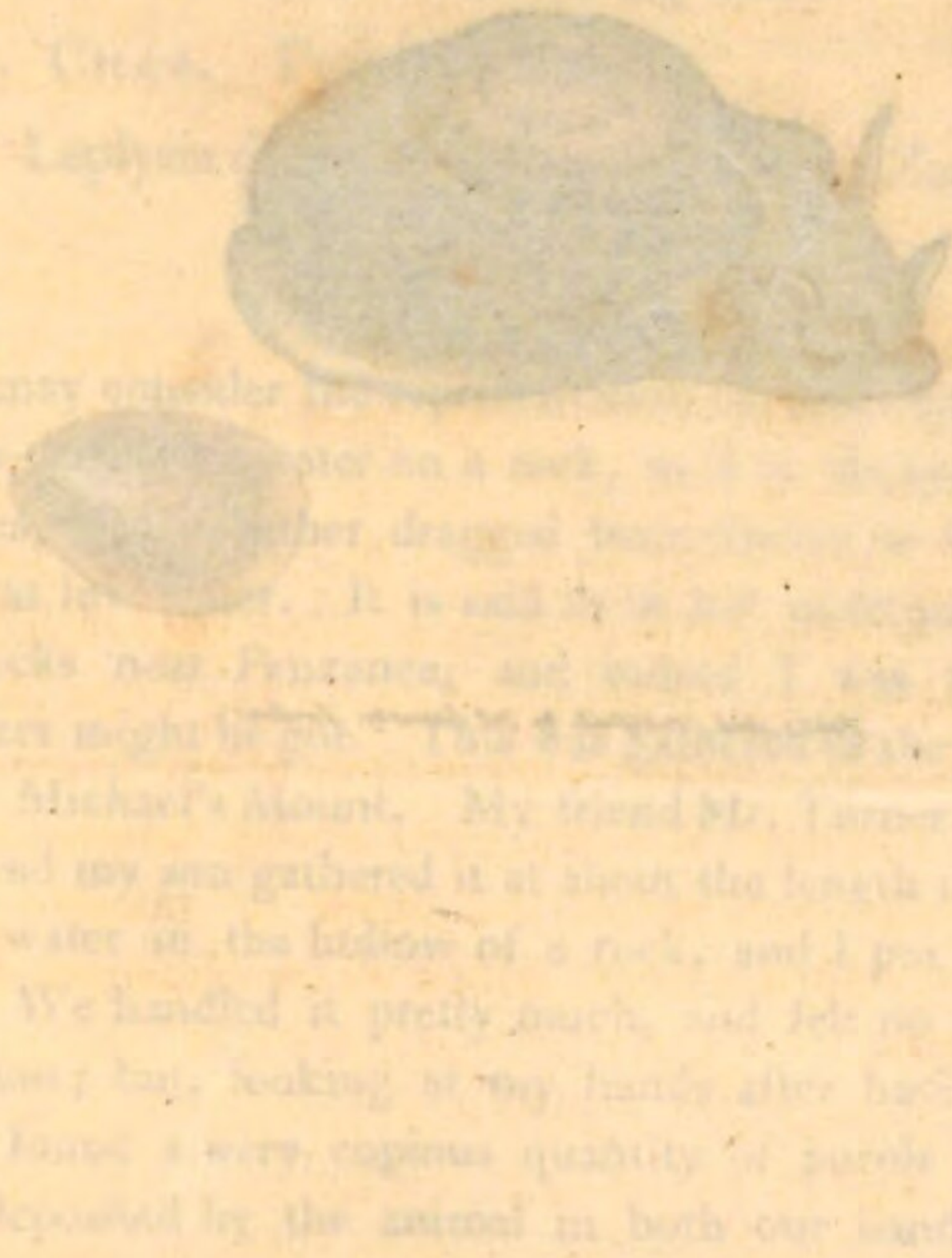
SYN. *Linn. Syst. Nat. Ed.* 12. 932. *n.* 16.
Faun. Suec. 1593.
Fabr. Ent. Syst. Em. 2. 145. *n.* 49.
De Geer. 1. *t.* 36. *f.* 8.
Panz. Faun. Germ. Mit. n. 19. *t.* 18.
Pimpla persuasoria. *Fabr. Syst. Piez.* 112. *n.* 1.

Length of the body without the aculeus, 11 lines.
—— of the aculeus, 1 inch 1 line.

MR. W. J. HOOKER took this rare insect, which we do not recollect to have seen in any other English collection, in a garden at Coltishall near Norwich.

Linnæus describes his insect in these terms:—"Black. Lip white. A white line before and behind the eyes. Thorax with three white stripes (*lituris*) on each side. Scutellum with two white dots: the anterior the largest. Abdomen cylindrical, sessile, with the margin of the first segment wholly white, that of the second interruptedly, the rest have four white dots. Legs ferruginous. Posterior tibiæ black. Stature of *Ichneumon manifestator*." *Syst. Nat.*

Our specimen varies from this description in the following particulars. The lip, (by which, as appears from the description in *Faun. Suec.*, Linnæus meant the anterior part of the front) is black, as well as the mouth. The trunk, besides the white lines or stripes mentioned in Syst. Nat., has a white tubercle under the insertion of the primary wings, a white spot above the base of the intermediate pair of legs, two square contiguous spots on each side of the metathorax, just at the insertion of the abdomen. The first segment of the latter has an interruptedly white margin, and the second is distinguished by four white spots like the remaining segments. The posterior tarsi as well as tibiæ are black, the latter are yellowish underneath at the base. Panzer's figure seems to agree better with the description of Linnæus, whose insect was very much larger than ours. Fabricius, in his Systema Piezatorum, has placed the Ichneumons with a sessile cylindrical abdomen and very long aculeus by themselves, as a distinct genus: this may perhaps be going too far; but at any rate they form a natural family in that numerous and perplexing tribe. The very long aculeus or oviduct of this insect and its affinities enables them to penetrate to a considerable depth into holes in wood, to convey their eggs to the body of the larva of some bee or other hymenopterous insect concealed in them. Mr. Marsham, in his ingenious paper upon *Ichneumon manifestator*, in the third volume of the Transactions of the Linnean Society, gives a very entertaining account of the proceedings of that insect to commit its eggs to their appropriate larva, which we recommend our readers to peruse.



Feb.ʸ 1. 1806. Published by Jas. Sowerby, London.

TAB. LIII.

APLYSIA hybrida.

Class 6. Vermes. *Order* 2. Mollusca.

GEN. CHAR. *Body* creeping, covered with reflected membranes, with a membranaceous shield on the back covering the lungs. An aperture on the right side. *Vent* above the extremity of the back. *Feelers* 4 resembling ears.

SPEC. CHAR. Purple all over.

SYN. Laplysia depilans? *Pennant, Brit. Zool.* 4. 42.

WE may consider the representation of this curious creature as under sea-water on a rock, as it is always found in the sea, and is either dragged from thence or left on the rocks at low water. It is said to be not unfrequent about the rocks near Penzance, and indeed I was told great numbers might be got. This was gathered in the year 1799 on St. Michael's Mount. My friend Mr. Turner pointed it out, and my son gathered it at about the length of his arm under water in the hollow of a rock, and I put it into a box.* We handled it pretty much, and felt no particular sensation; but, looking at my hands after having put it by, I found a very copious quantity of purple fluid had been deposited by the animal in both our hands. I put some of this on a piece of paper, and it remained nearly as brilliant for two or three years afterwards. This has

* and my two younger sons carried it alternately all the way to Merazion.

been thought by some to be the true Tyrian dye of the antients; although much has been said about *Buccinum purpureum* by Pennant and others, which last affords such a trifling quantity. At this age, which improves on every discovery, it might be worth while to those concerned in dyes, perhaps, to learn whether these animals may be acquired in sufficient quantities for such purpose.

Pennant calls his *Laplysia depilans*, and compares it with Pliny's description of *Lepus marinus*, observing that Pliny places it among the venomous marine animals, saying that even the touch is infectious. He also says that the smell is extremely nauseous. Ours does not agree in any of these characters, and I think I should have observed it if the smell had been nauseous. We have examined two bottles from Grenada, probably containing *Aplysia depilans* of Linnæus, by Sir Joseph Banks's favour, who had them sent him by Mr. Christ. Rapier with the following account in a letter:

" SIR,

" Although I have not the honour of being known to you, I have presumed to send you, what I hope will be favourably received, specimens of the true Murex of the antients. The fish were brought on shore by some fishermen of this place, St. George's, Grenada. The fish are known here by a name which I cannot express in English; but may be translated very closely by *Vulva marina*, and by the corrupt French of this country by *Pissa-la-mer*. The liquid which issues from the fish is of the most beautiful purple. A considerable quantity had been shed previous to its coming into my possession, and I was solicitous that what remained might reach you with as little alteration as possible. The two fish in No. 1. were put alive into the bottle, and very strong rum poured upon them and closed up." The rum of course had taken away the beautiful purple colour, and they remained of a purplish black.

" Those in No. 2. had been in my possesssion for many months, and had lost their purple fluid in a great measure. I am not even certain that they are the same species as No. 1.* They are sent to you for an accurate examination. I can readily believe that the Tyrian purple dye was first discovered by a dog eating a fish on the sea-shore, which tinged his mouth of so beautiful a colour as to excite curiosity how it originated. The fish which is now sent you, when in the surf of the sea, appears so like the liver of a bullock, that a dog might easily mistake it for that viscus."

We do not know why Pennant has made the generic name begin with an L, as we suspect that the name is derived from the Greek word Απλυσία, signifying *immundities*, *illotus*, from its being unwholesome or filthy. Turton has made it *Laplisia*.

* We think they may be the same species in a different state of growth: the small ones, No. 2, however, are brown with dark spots. We want more light on the subject.

STAPHYLEA pinnata.
Round-leaved Bastard Stone Oak.

Feb.y 1. 1806. Published by Jas Sowerby, London.

TAB. LIV.

STAPHYLINUS concolor.

Serrated-horned Staphylinus.

Class 5. Insecta. *Order* 1. Coleoptera.

GEN. CHAR. *Antennæ* moniliform. *Feelers* filiform. *Elytra* halved, covering the wings. *Body* elongate. *Tail* (*of the females*) simple, exerting two oblong vesicles.

SPEC. CHAR. Black. Antennæ serrated. Thorax naked, shining, with a dilated margin. Elytra downy, opaque.

SYN. *Marsh. Ent. Brit.* i. 498. 4.

Staphylinus dilatatus. *Fab. Ent. Syst. Em.* i. 6. 52212? *Syst. Eleuth.* ii. 592. 14? *Gmel. Syst. Nat.* 2027. 30? *Payk. Faun. Suec.* iii. 389. 29. *Latreille Hist. Nat. &c.* ix. 326. 74.

Length of the body	9	lines.
Breadth of the head	$1\frac{1}{2}$	
Breadth of the thorax	$2\frac{3}{4}$	
Breadth of the elytra	$2\frac{1}{2}$	

WE were permitted to make a drawing of this singular and very rare *Staphylinus* by our kind friend, the ingenious author of *Entomologia Britannica*, in whose cabinet the only British specimen of it ever taken is preserved. It is also found in Germany, Sweden, and France; for we think it is beyond a doubt the *Staphylinus dilatatus* of Paykull and

Latreille, and most probably of Fabricius: but we have placed a note of interrogation to the synonym of the last of these authors, because he describes the colour of the elytra by the term *fusca*, which will not accord well with our specimen. Yet his description in every other respect agrees with it; mentioning the serrated antennæ, the dilated margin of the thorax, and the metallic hues that in certain lights glitter upon it: on this account we are pretty certain that ours can be nothing more than a variety of his insect.

Body black. Head, excluding the neck, cordate, considerably narrower than the thorax, shining, without punctures, one or two excepted on each side between the eyes and the neck. Antennæ recurved, a little longer than the head, hairy, black; with the last joint piceous: their three first joints are nearly obconical; the seven following ones on their lower side jut out into an angle, forming so many serratures; the last is nearly ovate and acute. The thorax is naked, shining and black; but behind and on the sides, in certain lights, it reflects a greenish metallic hue; it is rounded, and widest behind, somewhat compressed before, and truncate with a sinus for the reception of the neck; its disk is very convex, but its sides are depressed, dilated and flat; its surface is smooth, with about twenty-six impressed punctures, viz. eight disposed in two triangles on the disk, the acute angle of which is distinguished by two approximate ones, and eighteen in the margin, thus disposed, beginning at the anterior angle, 2. 5. 2. 2. 5. 2. The anterior tarsi are dilated, and fulvous underneath. The elytra are rather longer than the thorax, but not quite so wide, opaque, black, except the angle at the shoulders, which is distinguished by a ferruginous dot that is almost concealed by the thorax. The abdomen is shining and hairy. The anus is terminated by a rectilinear forceps, and two linear and very hairy appendages: these are all probably sexual distinctions.

55
March 1 1806. Published by Jas Sowerby London.

TAB. LV.

PHALÆNA N. *X* scriptum.

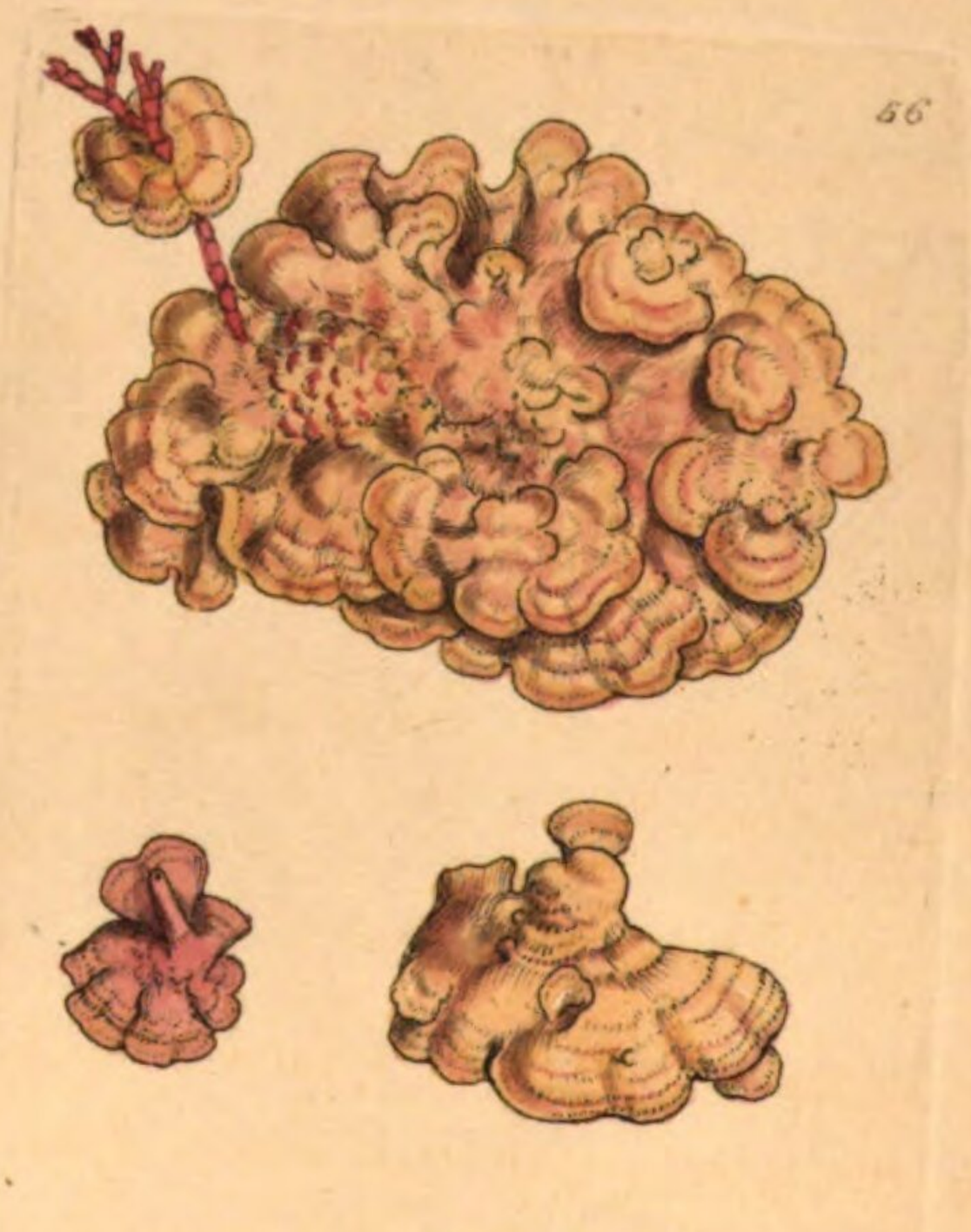
Class 6. Insecta. *Order* 3. Lepidoptera.

SPEC. CHAR. Crested. Wings fuscous, variegated with white and black, in the middle a large white spot marked with a letter *X*. Lower wings fuscous.

THIS rare Moth is in the possession of my friend Thomas Marsham, Esq., Tr. L. S.

The letter *X* is a sufficient mark at present to distinguish it from its allies, although it is tolerably distinct in other respects. We wish we knew the use of this numerous tribe of insects, as it is remarkable that only the Silk Worm and the Arindey Worm, figured in *vol. 7. of Linn. Trans.*, have been made subservient to the arts. There can be no doubt that every one has its use, although we must wait patiently to find it out, and in the mean time we can only learn to distinguish their kinds.

Some of the smaller *Tuniceæ* are very fond of cloth, feathers, &c., and are always ready to take advantage of our inattention or negligence of those things.



Feb. 1 1803. Published by Jas. Sowerby, London.

TAB. LVI.

CORALLINA auricularіæformis.

Class 6. Vermes. *Order* 4. Zoophyta.

GEN. CHAR. Animal growing in the form of a plant. *Stem* fixed with calcareous subdivided branches, mostly jointed.

SPEC. CHAR. Stemless, spreading like a Fungus or Lichen.

SYN. Corallium cretaceum lichenoides. *Ellis Corallines*, 76. *tab.* 27. d. D.

THIS little elegant Coralline (for I cannot make it any thing else in the present system) is nearest allied to the *Corallina Opuntia* in its young or early state. It is of so curious a formation, that I wonder it has not been recognised as a British species before now.

I have seen it in some cabinets, but no where with a name. It occurs in tolerable abundance on the rocks at Kynance Cove, and has a beautiful appearance, hanging round the sides in a shelf-like manner, or at the bottom of a hole growing horizontally, sometimes rising with the assistance of *Corallina officinalis* in elegant order—higher up like *the top figure*. We cannot help remarking the

resemblance it bears to some of the Fungi. The manner of its growth resembles much *Boletus versicolor* and *Hydnum Daviesii*, &c.; it also resembles the *Auriculariæ* in its mode of growth, and like them is smooth on the under surface*. It is, however, unlike them, in having the upper surface smooth; and it is only its situation, and its composition of phosphate of lime and animal gluten, that would determine it to be a Coralline. It is more or less of a deep pink, like *C. officinalis*, and like that is liable to be bleached.

* On examining it with the microscope, we see minute cells in transverse rows, somewhat in concentric circles, convex towards the outer edges, very like those formed by *Boletus igniarius*, English Fungi, *tab.* *side figure.* The whole growth is so like a fungus, that those who formerly thought fungi of an animal nature might have considered themselves confirmed in their idea by observing this. See *Encyclopædia Britannica*, FUNGUS.

Feb.ʸ 1. 1806. Published by Jas. Sowerby, London.

TAB. LVII.

SCARABÆUS pumilus.

Class 5. Insecta. *Order* 1. Coleoptera.

SPEC. CHAR. Black. Thorax of the male armed with three horns: the intermediate one very short; the lateral ones protended shorter than the head; sides of the thorax rugose.

SYN. Scarabæus pumilus. *Marsh. Ent. Brit.* 1. 8. *n.* 2.

Length of the body { of the male $6\frac{1}{2}$ / ——female 7 } lines.
Breadth of the thorax { —— male $3\frac{1}{2}$ / ——female 4 }

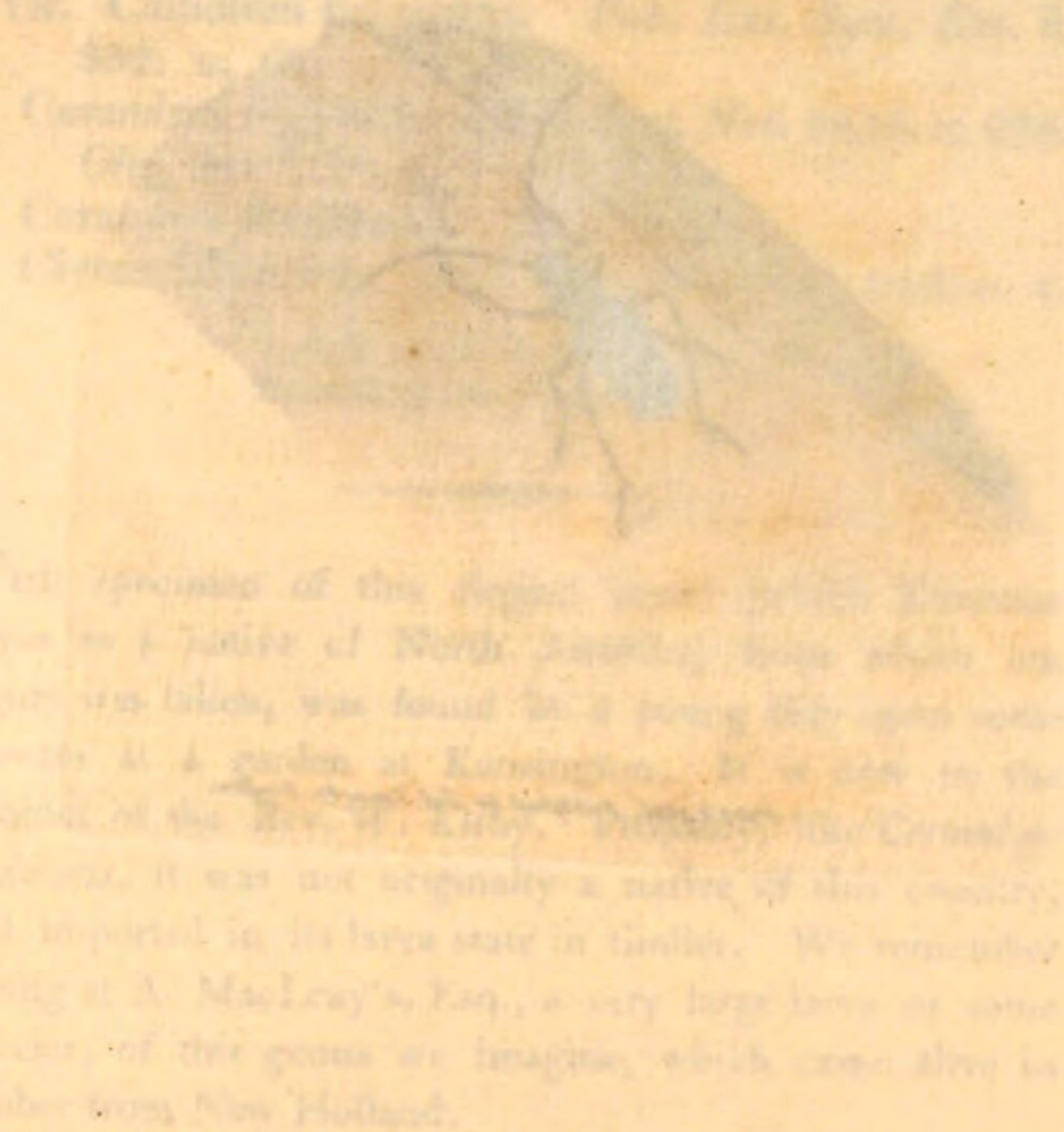
THIS insect was first taken by the Rev. J. Burrell, in the neighbourhood of Holt, in Norfolk. The Rev. R. Sheppard has since found it occasionally in the spring, on Rushmere and Martleham heaths, between Ipswich and Woodbridge, in Suffolk.

Although it very nearly resembles *Sc. Typhæus* Linn. it is, we think, nevertheless, quite distinct; it differs from it not only in size, being considerably smaller, but the horns of the thorax, compared with the head, are much shorter, and the surface of its sides more unequal, rugose, with a greater number of impressed points. In the female, which is larger than the male, instead of lateral horns, the thorax is armed on each side with a short tooth, or rather

an acute tubercle; between which, in the place of the intermediate horn, there is an elevated transverse line or ridge. This sex differs from the female of *Sc. Typhæus* in scarcely any thing but size.

What may be the use of the horns which arm the thorax of the male of *Sc. Typhæus* and *pumilus*, and the head and thorax of many of the same sex in the Fabrician genera *Copris* and *Geotrupes*, seems at present not ascertained: if, however, the insect before us be taken in the hand and held fast, he will resist incumbent pressure with great force, and make way under it; from which we may conjecture that these horns are useful to him in excavating his subterraneous habitation.

Our drawing was made from specimens in the cabinet of the Rev. W. Kirby. *The upper figure* represents the *male*, and *the lower* the *female*.



Feb.y 1 1806. Published by Jas. Sowerby, London.

TAB. LVIII.

CERAMBYX fulminans.

Class 5. Insecta. *Order* 1. Coleoptera.

GEN. CHAR. *Antennæ* setaceous. *Eyes* lunar, embracing the base of the antennæ. *Thorax* partly receiving the head. *Elytra* sublinear. *Body* oblong.

SPEC. CHAR. Thorax globose, spotted. Elytra black, with undulato-angular white bands.

SYN. Callidium fulminans. *Fab. Ent. Syst. Em.* ii. 332. *n.* 62.
Cerambyx fulminans. *Gmel. Syst. Nat.* 1853. *n.* 278. *Oliv. Ins.* 70. *t.* 5. *f.* 63.
Cerambyx fulminans. *Turt.* 2. 330.
Clytus fulminans. *Fab. Syst. Eleuth.* ii. 346. *n.* 4.

Length of the Body 8
Breadth of the Elytra 2
} lines.

THE specimen of this elegant insect (which Fabricius gives as a native of North America) from which our figure was taken, was found by a young lady upon some flowers at a garden at Kensington. It is now in the cabinet of the Rev. W. Kirby. Probably, like *Cerambyx violaceus*, it was not originally a native of this country, but imported in its larva state in timber. We remember seeing at A. MacLeay's, Esq., a very large larva of some species, of this genus we imagine, which came alive in timber from New Holland.

The insect before us belongs to Mr. Marsham's fifth family of *Cerambyx*, (*Thorax unarmed, globose, not depressed*), consisting of species which Linné had improperly considered as belonging to the genus *Leptura*, since their

claim to be regarded as *Cerambyces* is founded not only upon œconomy and habit, but likewise upon character, these insects exhibiting all the genuine characters of that genus, particularly the lunar or reniform eyes, so happily noticed by De Geer, who arranges them with those *Cerambyces* that have a globose depressed thorax, from which Mr. Marsham has judiciously separated them.

Fabricius originally considered this family as forming part of his genus *Callidium;* but in his *Systema Eleutheratorum*, after Schrank, he has made a new genus of them, under the name of *Clytus*. Latreille, however, a most accurate observer, and who has entered more deeply into the anatomy of insects than almost any entomologist of the present age, still regards them merely as a family or section of *Callidium*. (*Hist. Nat. Gen. et Part. des Crustac. et des Ins. t.* iii. *p.* 217.)

The body of *Cerambyx fulminans* is black beset with cinereous hairs, which underneath and upon the legs are so thinly scattered as scarcely to obscure their blackness. Head channelled longitudinally. Antennæ of the length of the body, at the base whitish with cinereous hairs. Thorax with a large obcordate velvety black spot, and two smaller oblong-oval lateral ones. Scutellum black edged with cinereous hair. Elytra dehiscent at their apex, black, pencilled with undulato-angular cinereous transverse lines, formed of hair. A cinereous crescent also ornaments their tips. Wings black.

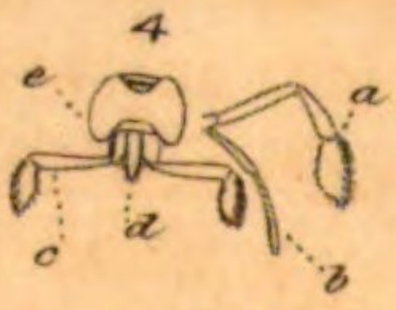
The males in this genus have usually longer antennæ than the females; a circumstance which will account for a difference observable between the description of Fabricius and that above given. He says: "*Antennæ breves*," whereas in our specimen they are as long as the insect. He also describes the body of his as fuscous: in ours it is quite black. Notwithstanding these differences, we make our reference to him without hesitation, since in every other respect our specimen answers exactly to his description.

Mr. SOWERBY *is sorry to inform the Public, that the Printer's Messenger lost the Remainder of the MS. of this Volume on January* 24, 1806, *in the Evening, by a Man personating a Servant of Mr. Sowerby, at his Gate, and taking it of him,—probably supposing it might contain something valuable. It will be got ready with the First Number of the next Volume, intended to be published June* 1, 1806; *Mr. S. finding it necessary to take Time to forward the Prints of the present Volume to supply his Friends.*

1

2

3



4

5

6

7

8

Febr 1. 1806. Published by Jas. Sowerby, London.

TAB. LIX.

CARABUS chrysostomos.

Golden-mouthed Carabus.

SPEC. CHAR. Blue-green: with the mouth, antennæ and feet rufous. Head and thorax deeply punctate. Elytra truncate at the end, and subemarginate.

SYN. Carabus chrysostomos. *Marsh. Ent. Brit.* i. 469. 101.

Carabus dentatus. *Ross. Faun. Etrusc.* i. 222. 551. *t.* 2. *f.* 11.

Drypta emarginata. *Fab. Syst. Eleuth.* i. 230. 1. *Latreille Hist. Nat. &c.* viii. 264. 1. *t.* 72. *f.* 7.

Cicindela emarginata. *Fab. Ent. Syst. Em.* i. 177. 37. *Panz. Faun. Ins. Germ. Init. n.* 28. *f.* 15.

Length of the body 4
Breadth { of the thorax $\frac{3}{4}$ } lines.
Breadth { of the elytra $1\frac{1}{2}$ } lines.

THE specimen from which our figure of this very rare and most elegant little insect was taken is in the rich cabinet of Alexander MacLeay, Esq., to whom it came amongst the insects of the late Mr. Lewin. Mr. Marsham described it from one in the collection of that intelligent and indefatigable entomologist, the lamented John Beckwith: these are the only two British specimens that are at present known to have been taken. The Rev. W. Kirby possesses one from Italy, which was sent him by a Swedish entomologist, Major Gyllenhal, as the *Drypta emarginata* of Fabricius. This specimen is bluer than ours, and answers exactly to that author's description of his insect. M. Latreille observes that it is rare in France, and found under stones.

The entomologist of Kiel originally gave this insect as a *Cicindela*: Mr. Marsham, with more reason perhaps, has

considered it as a *Carabus*, to which genus it is certainly more nearly related both by habit and habitat than to *Cicindela:* still, however, it has considerable affinity with the latter genus, and may be regarded as one of the links which connect it with the former. In the *Systema Eleutheratorum,* Fabricius has placed this insect in the genus *Drypta,* which he adopted from that most accurate entomologist M. Latreille, who in his late work (*Hist. nat. générale et particulière des Crustacés et Insectes, tom.* iii. *p.* 87) has placed it in the third family (*Carabici*) of his first Section (*Feelers six, all the Tarsi* 5*-articulate*) of his first Order (*Coleoptera*). Under this it belongs to his Division A, (*Celeripedes*), and subdivision iv (*Longipalpati*).

The most striking circumstances in which this insect differs from *Carabus* are its feelers, which instead of being filiform, with the intermediate ones not remarkably more slender than the others, are elongate and subcapitate; the last joint being much larger than the rest, and securiform or hatchet-shaped; and the intermediate ones, which are filiform, and longer than in *Carabus,* are much slenderer than the others. The antennæ are strikingly distinguished from those of every other *Carabus,* by the remarkable length of the first joint. The thorax, though it is rather obcordate, has no margin, and is subcylindrical. The maxillæ also are protended, and the eyes very prominent. We shall now give a very particular description of this singular insect, that our readers may be better able to judge of its claim to be considered as belonging to a distinct genus.

Body depressed, blue-green, rather hairy, hairs diverging. Head elongate, very narrow, covered with impressed points. Mouth rufous. Jaws protended, toothless, acuminate, forcipate at the end. Apex of the valvulæ hooked, on the inner side setoso-pectinate. Feelers elongate, rufous. The exterior, or valvular, consisting of three joints; the first elongate, subclavate; the intermediate subclavate; the last large, compressed, nearly triangular: the two last

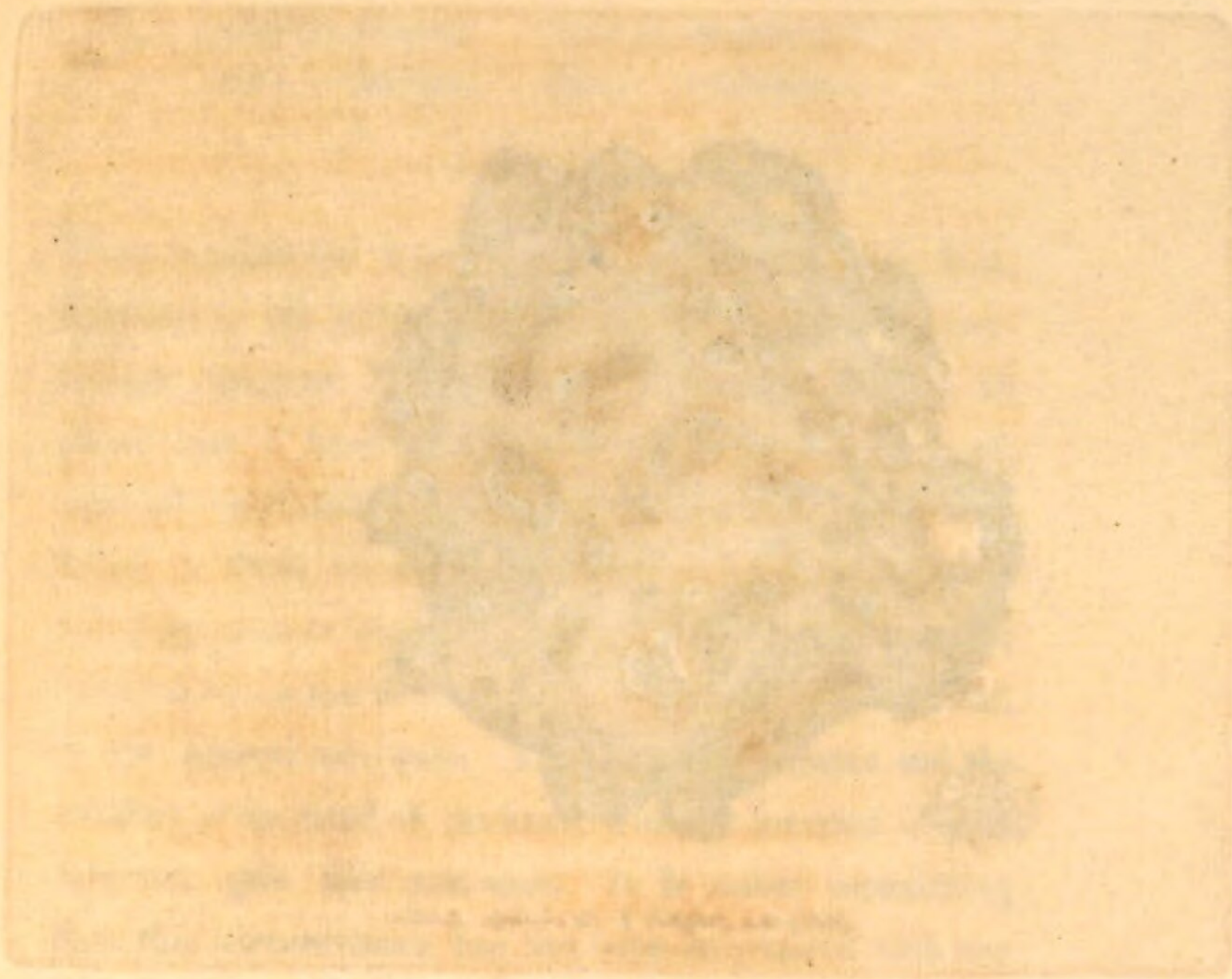
joints form an angle with the first. The intermediate feelers consist of two joints ; the first filiform, the second very slightly clavate. The interior or labial feelers consist of three joints, the first very short and rather conical, the second long and nearly filiform, the third large hatchet-shaped ; the first forms an angle with the second, and the second with the third. Labrum, or upper-lip, transverse, depressed, at the end obsoletely three-lobed, surface uneven, without points. Labium, or under-lip, minute, very slender, nearly filiform, protended between the interior feelers. Chin obcordate, at the end three-lobed; lateral lobes longest and acute. Antennæ lateral, inserted just above the labrum, filiform, covered with short hairs, rufous, consisting of eleven joints: first joint very long, occupying more than a fourth part of the whole antenna, thicker than the following ones, subclavate, black at the end; the second very short, turbinato-conical ; the third longer, and growing gradually thicker to the end; the rest of nearly equal size and filiform—the last rather acute. Eyes lateral, hemispherical, very prominent. Neck and throat distinct, narrower than the head, without points, shining. Trunk very narrow, subcylindrical, not margined, widest at the head, rather obcordate, covered with deeply impressed points, distinguished on the thorax by a longitudinal channel. Breast-bone not remarkable. Legs rufous, nearly of the same length. First joint of the hips large, nearly hemispherical; the second smaller and obconical. Thighs thickest in the middle. Tibiæ growing gradually thicker from the base to the apex—the anterior pair distinguished by an internal lateral notch or sinus; terminal spines very short. Tarsi consisting of five joints; the last but one bipartite with long lobes; the last ascending, curved, subclavate, armed at the end with a double crooked claw. The first joint of the hips of the posterior legs is flattish, and rather triangular ; the second is oblong-oval and placed under the thigh longitudinally, so as to be

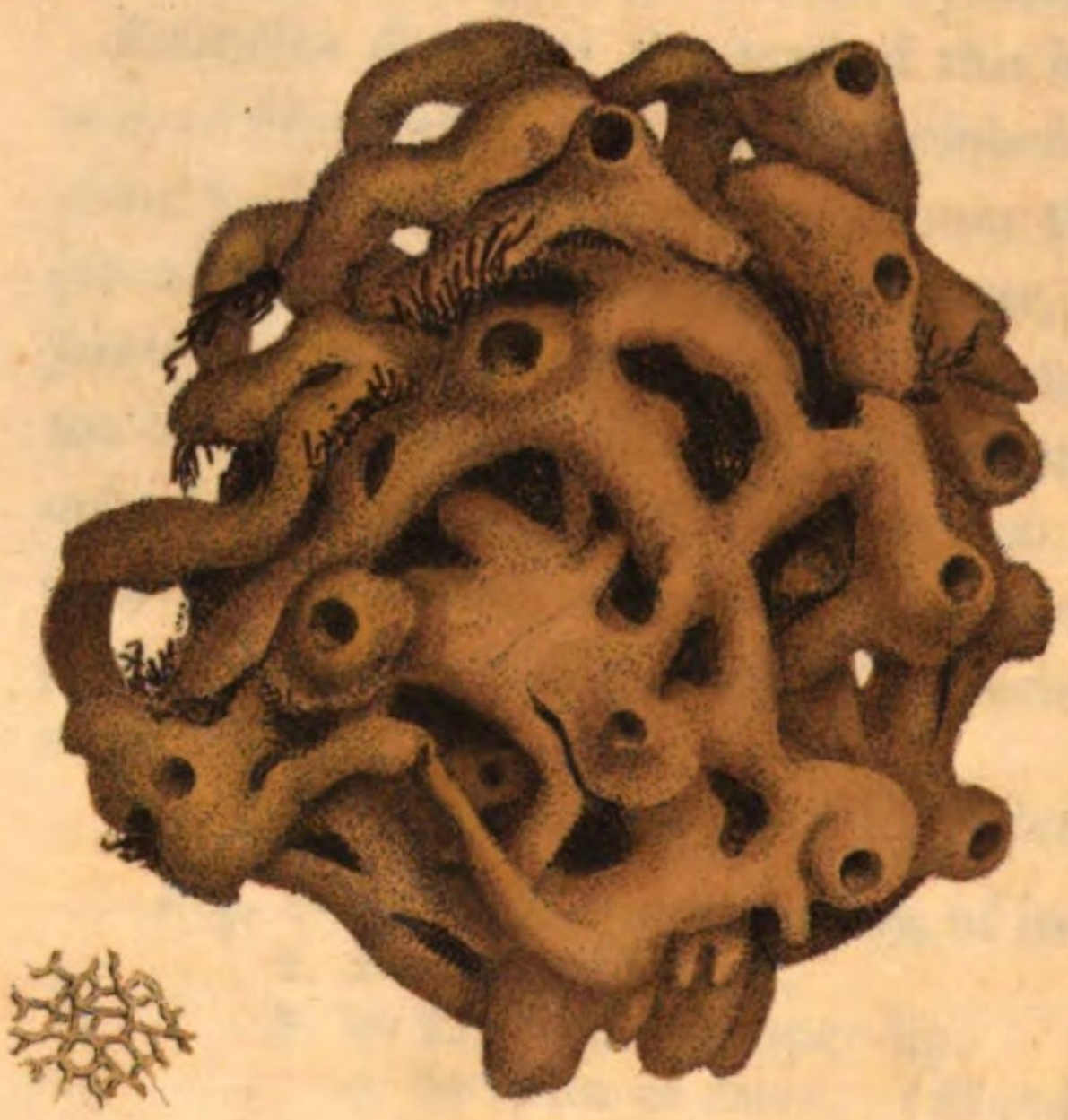
a kind of support to it. The scutellum is obsolete. The elytra are shorter than the abdomen, slightly margined, at the end rather widest, truncate and subemarginate, taken together of an oblong-oval shape. Their surface is distinguished by nine lines of deeply impressed points; the line nearest the suture towards the base diverges a little, so as to give room for another very short line of points, running from the base a little way down the suture: in the space between this and the diverging line two impressed points are observable. The interstices between the lines are rather convex, and very minutely punctulate. The abdomen consists of five segments with a very obtuse anus.

Fabricius describes the tarsi of this insect as consisting only of four joints, with the last bilobed; from which it is plain he did not take into the account the terminal or unguicular joint. Without this, however, no insect has five joints in its tarsi. In Panzer's figure, which, although too blue, is certainly intended for our insect, the tarsi have only four joints with the last but one bilobed. This is clearly a mistake. M. Latreille corrects this error, by placing it in a section in which the species have all the tarsi of five joints.

Explanation of the Plate.

Fig. 1. Carabus chrysostomos, of its natural size.
2. Ditto, magnified.
3. *a*. Labrum or Upper-lip.
b. Maxillæ or Jaws. (*Mandibulæ Fab.*)
4. *a* Exterior Feeler.
b Intermediate Do.
c Interior Do.
d Labium or Under-lip. (*Ligula Fab. Levre inférieure Latr.*)
e Mentum, or Chin. (*Labium Fab. Ganache Latr.*)
5. Apex of one of the Valvula. (*Maxillæ Fab.*)
6. One of the Tarsi of five joints.
7. The Antenna.
8. One of the Elytra.





Feb.y 1 1806. Published by Jas. Sowerby, London.

TAB. LX.

SPONGIA cancellata.

Cancellated Sponge.

Class 6. Vermes. *Order* 4. Zoophyta.
Gen. Spongia. *Spec.* cancellata.

This remarkable Sponge was brought me fresh from Brighton by Mr. Fellows, September 17th 1805. Its cancellated structure distinguishes it at first sight from all others that I have seen either specimens or figures of, especially as British. Besides this structure in the general habit, its fibres are also cancellated or reticulated with a horny appearance when magnified. All spongiæ seem to betray more or less the habitation or nidus of some animal, in the general structure. The kneed appearance and the swelling at the bend of the knee, with the inverted conical aperture, give this assurance. It is rather astonishing that this circumstance has not been ascertained with any certainty.

In the present laudably inquisitive age there is little doubt but it is likely to be found out.

BSB Bayerische StaatsBibliothek
MDZ Münchener DigitalisierungsZentrum Digitale Bibliothek

Sowerby, James,

The British Miscellany: or coloured figures of new, rare and little known animal subjects many not before ascertained to be inhabitants of the British Isles ; and chiefly in the possession of the author
Bd.: 1

London (1806)

Zool. 498 u-1/2
urn:nbn:de:bvb:12-bsb10308922-7